



History Line

A NEWSLETTER OF THE FOREST SERVICE HISTORY PROGRAM

Fall 1999





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Fall 1999

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Photo Credit: USDA Forest Service Photo



Editor's Remarks

Guest Editorial

Why We Need a National Forest Service Museum—Now

Karl F. Wenger, Immediate Past President
Society of American Foresters

Since the idea of a national Forest Service Museum first surfaced in 1988, I have followed its development in a quite desultory fashion, perhaps like most of you—paying my dues, reading the newsletter, and forgetting about it between times.

However, the rate at which the Forest Service is changing adds considerable urgency to getting the museum established. As time passes and personnel, equipment, operations, and policies change, finding the items to furnish a museum will become more and more difficult.

Consequently, if a museum is to come into being, adequate funds must be obtained soon. To do that, we need sound and strong justifications to persuade potential large-scale donors that their money will buy them perpetual favorable recognition.

So why do we need a museum?

The Forest Service is a unique institution, not only because it was given control of large areas of unsettled land to manage, but also because it developed an organizational culture that was unmatched among Federal agencies. Students of government have agreed that the Forest Service was the best-managed and most efficient of Federal agencies in the discharge of its congressionally mandated responsibilities. It is only in comparatively recent years that it has been criticized by elements of the public that do not agree that timber is the primary product of forests and that manipulation of tree cover is necessary to provide the other goods and services the public expects of its forest lands.

A museum is needed to preserve the accumulated experience of the Forest Service as it developed management policies and operational techniques to control activities on large acreages of land. Just as an individual gains experience by remembering trials and errors of the past, so an institution can improve its functions by recording and maintaining the evidence of past operations and their results. A properly managed museum can be the repository of an institutional memory.

Regarding a museum as the repository of an institutional memory immediately suggests contents beyond the display of old equipment. Certainly it should have such a display, to illustrate the successive stages in the development of its operational techniques. In a Forest Service museum, one would expect to see early firefighting tools and detection instruments, tree-measuring devices, communications gear, personal equipment, and other items associated with managing forest land.

However, one would expect an institutional memory to include more than pieces of equipment—as essential as these are in a museum. One would also expect a collection of records, either originals or copies, that would comprise as complete an account as possible of legislation, regulations, administrative decisions, operational reports, research findings, important letters, and personnel appointments that have directed and controlled the actions of the Forest Service from its beginning.

With such a record, the museum could serve as a study center for historians, natural resource scientists, current Forest Service administrators, and any others hoping to benefit from Forest Service experience. Inclusion of the voluminous “Index of the National Archives” would provide a bridge to extensive related sources of information.

One would also expect an array of pictures illustrating the stages of the agency's growth and increasing knowledge and skill, the people who made significant contributions to its progress, the events that changed its operations, and the developments that affected the larger society.

Another logical inclusion would be a collection of memoirs, of which there are an increasing number, by foresters and their relatives. These should also be of interest to historians because they provide in each instance a unique view of the events of the past. They not only add personal flavor to inanimate records, but often reveal aspects of the past that would otherwise be lost.

Properly operated museums have ongoing programs to highlight their contents and often serve as educational centers for the subjects they illustrate. Thus, a Forest Service museum that has a variety of vegetation types, is within easy travel distance, and has the necessary facilities and adequate staff and financing could serve as an educational and training center for individuals and organizations concerned with natural resources issues. Periodic lecture series might attract groups such as the Elderhostel organization. Federal and State agencies might use the facilities for training sessions. Private groups might find the installation attractive for meetings. Thus, a National Forest Service museum could promote the continued sound management of our forest resources as well as serve as a repository for equipment, pictures, and records.

The longer the commitment to a museum is delayed, the more difficult the establishment of a museum will become.

Jerry Williams Named New Forest Service Historian as the Forest Service History Program is Revitalized

The Forest Service reestablished the Forest Service History Program in Washington, DC, on December 20, 1998. Gerald W. Williams, Ph.D., from Region 6 was chosen to fill the role of national historical analyst for the agency and started working in the Office of Communication at the Washington Office on April 26, 1999.

Williams has already contacted a number of you about what you think the agenda and priorities of the national History Program should be. He hopes that with increased visibility and interest in the History Program, the national office will see fit to expand the scope of the program in the future.

"There are lots of possibilities for the History Program," says Williams, "including conducting historical analyses on current policy issues for the Chief and the NLC, researching contract histories, publishing the *History Line* and various historical books and documents, using new computer technology to provide almost instant access to historical materials, supporting internal history projects, attending and presenting at various historical meetings and conferences, providing funding (including travel) to do basic research in the National Archives and the Library of Congress, initiating photographic projects, funding oral histories, creating historical displays, and being involved in historical celebrations, as well as answering the history questions posed by employees and the public." Williams intends to work jointly with retiree associations, the Forest Service Museum in Missoula, Grey Towers, the Pinchot Institute, the Forest History Society, universities, and others. He is also exploring the possibility of having public and environmental history student interns help with the program. As for additional staff, that will depend on the scope of the program and support from all levels in the agency.

Of particular interest will be working with Mike Kaczor, the new Heritage Program Leader in the Office of Recreation, Heritage, and Wilderness Resources at the Washington Office. Since the Heritage Program overlaps the History Program, especially at the field level, it will be important to provide increased support for history at all levels in the Forest Service.

It is also in the interest of the Forest Service to continue to provide assistance and support for celebrations. As you can see, the list below is not very long, but it shows that *very significant events in the history of public land management have occurred in the last 100 years:*

- 1900 – Society of American Foresters founded in Pinchot's home on November 19. Forest Service retirees reunion in the summer.
- 1901 – Division of Forestry becomes Bureau of Forestry on March 2. Division of Forestry ("R") created in the USDI General Land Office on November 15.
- 1905 – Second American Forestry Congress in January.
Administration of the Forest Reserves transferred from USDI General Land Office to USDA Bureau of Forestry on February 1.
Bureau of Forestry name changed to Forest Service effective July 1.
- 1907 – District (now regional) offices established in November.

Williams says, "I'll be providing as many background documents, papers, Powerpoint presentations, slide shows, and talks as possible. There may be opportunities for larger reports, even books, about these events, but we will first have to come up with ideas of what needs to be worked on, documented, explained, expanded, celebrated, and so on."

What would you like to see as the focus of the Forest Service History Program?

Send e-mail replies to gwilliam/wo on the IBM system (note that there is no "s" on "gwilliam") or williams_gerald/wo@fs.fed.us on the Internet. Hard-copy mail may be sent to Jerry Williams at the address on the inside cover of this publication.

Welcome, Jerry!

History Thought for the Day

Why did Jefferson—the great progressive among the founders, a man so optimistic about the future—call for such intense effort to preserve the past? Should we not be looking forward rather than backward? ... The future is, by definition, what does not exist in the present. It will be generated out of us, out of our ideals and hopes or determination, only insofar as the past forged those qualities in us. *To forget the past is to lose identity.* This is what makes movies about amnesia so dramatic. If the protagonist does not know what he did yesterday, he cannot know who he is today.

Source: Gary Willis, "Memories and Macaroni," an article about Thomas Jefferson in *Civilization*, the journal of the Library of Congress.



History Blurbs

Happy Birthday!

The following Forest Reserves celebrated their centennials in 1998. The Washington Office Lands staff and Office of Communication provided each forest created from these reserves that wishes to celebrate its centennial that year with a hand-calligraphied, framed copy of the proclamation that established the forest.

Forest Reserve

Pine Mountain, Zaka Lake
Prescott
San Francisco Mountains
Black Mesa

National Forest

Los Padres
Prescott
Coconino
Apache-Sitgreaves, Tonto



Forest Service Celebrates Grasslands' 60th Anniversary

On May 24, 1997, Northern Region Deputy Regional Forester Kathleen McAllister, Custer National Forest Supervisor Nancy Curriden, and representatives from the region's four national grasslands participated in a celebration at the National Grasslands Visitor Center in Wall, South Dakota, to mark the 60th anniversary of the national grasslands during National Grasslands Week, May 18-24.

The Forest Service administers 20 national grasslands (approximately 4 million acres). The Custer National Forest manages and administers the Northern Region's four national grasslands in North Dakota and South Dakota.

- Cedar River National Grasslands, North Dakota, 6,717 acres, Lemmon, South Dakota.
- Grand River National Grasslands, South Dakota, 154,981 acres, Lemmon, South Dakota.
- Sheyenne National Grasslands, North Dakota, 70,268 acres, Lisbon, North Dakota.
- Little Missouri National Grasslands, North Dakota, 1,028,045 acres, Dickinson, North Dakota.

Drought, dust storms, floods, and insects struck the heart of the agricultural lands of the Great Plains region in the 1920's and early 1930's. The U.S. Department of Agriculture was assigned responsibility for these lands in 1935, and in 1937 the Secretary of Agriculture was directed "to develop a program of land conservation and land utilization ... to correct maladjustments in land use."

Four million of acres of the lands became "national grasslands" in 1937, to be managed by the Forest Service as part of the National Forest System.

Famous Forest Service First

Source: Autobiography of Thomas J. Jones (Shasta National Forest Supervisor in 1928), as presented in February 1995 issue of the FSX Club (California Forest Service retirees) newsletter.

Spring 1928: Forest Service employee Frank Meyers developed the first battery-operated headlamp for night use on the fireline on northern

California's Shasta National Forest. Although these newly developed headlamps did not become widely available for 2 or 3 years, it was estimated that they increased the efficiency of night crews by about 50 percent. Previous night illumination had come from kerosene or sometimes carbide lamps, the "Palouser" candle in a tin can, or the folding Stonebridge lanterns with candle. The new headlamps directed light wherever the worker turned his head—a great improvement over stationary light sources.

A Little After the Fact

"They Hired Out To Be Tough" is the title of the Forest Service museum's exhibit of Forest Service history that was open to the public through August 1997 at the museum at Fort Missoula. The exhibit presented overviews of Forest Service Research, cooperative forestry, the National Forest System, and the proposed role of the Forest Service museum in securing, storing, presenting, and interpreting the entire rich history of the Forest Service. For those who were unable to visit the exhibit, the museum offers a 32-page booklet that presents the larger historical context from which the exhibit has drawn. This is available for \$5.00 plus \$1.00 postage from Edward G. Heilman, National Forest Service Museum, P.O. Box 2772, Missoula, MT 59806-2772.

Books and Articles

Olympic Forest History Published

A new national forest history has just been printed—*Frontier Legacy: History of the Olympic National Forest 1897 to 1960*, by Jack R. Rooney. This 100-page, softbound volume has *lots* of early photos, anecdotes, and stories about the Forest and the many interesting people that played substantive roles in the important stages of the Olympic's history. The Olympic welcomes phone and mail orders. To use a credit card by phone, call 360-956-2400. To order by mail, send a check for \$16.15 to Olympic National Forest, 1835 Black Lake Blvd. SW, Olympia, WA 98512-5623.

New Pinchot Book Published

Char Miller (a Pinchot historian) has published a new book on Gifford Pinchot entitled *American Forests: Nature, Culture, and Politics*. This book of readings and articles on the National Forest System is great! Such authors as Pisani, Reiger, Steen, Wolf, Rothman, Bolle, Robbins, Roth, and Langston have filled this 289-page paperback with wonderful articles. The publisher is the University Press of Kansas (1997). It is available for \$17.95 from the University Press of Kansas, 2501 W. 15th Street, Lawrence, KS 66049-5905. Phone 785-864-4154. Worth reading!

The Evolution of Tropical Forestry: Puerto Rico and Beyond (Interview with Frank H. Wadsworth)

Rarely does a day pass without a newspaper article dealing with the loss of the world's forests. Tropical forests attract the most attention. While there is an abundance of available information and disinformation, there are few words of wisdom. In this condensed interview, Dr. Frank Wadsworth reflects on the evolution of tropical research and many of the people and organizations involved. He covers the status of tropical research and the successes and failures of the Tropical Forest Experiment Station in Puerto Rico, United Nations agencies, nongovernmental organizations, the Panama Canal Zone, and other topics. This is a must-read for those who want insight into the past to better understand the present and the future. It is also very enjoyable reading.

Dr. Frank Wadsworth has worked for the USDA Forest Service for more than 60 years, working in Puerto Rico for more than 50 of those years conducting research on the management of tropical forests. He has become known as one of the world's leading experts on tropical forest management. Testament to this is his recently released book *Forest Production for Tropical America* (USDA Agricultural Handbook 710).

This small volume is available from the Forest History Society for \$5.50—the cost of shipping and handling. Order from: The Forest History Society, 701 Vickers Avenue, Durham, NC 27701. Credit card orders will be accepted. The cost of multiple

copies will be determined by the number requested.

History of Forest Service Architecture Published

The Forest Service Washington Office Engineering staff will soon be publishing *A History of the Architecture of the USDA Forest Service*. For copies contact: USDA Forest Service, Engineering Staff, P.O. Box 96090, Washington, DC 20090-6090. Phone: 202-205-1400.

HiStory Ink Books Publishes Three New Books About the Forest Service

The following three books were published by HiStory Ink Books, P.O. Box 52, Hat Creek, CA 96040. Phone 916-335-7542. All three books are 6" x 9", soft-covered, and perfect bound. Make checks or money orders payable to HiStory Ink Books. There is always free shipping if two or more books are ordered for the same address. Titles may be the same or mixed.

Forest Service Memories: Past Lives and Times of the United States Forest Service was published April 1, 1997 (no foolin'). This 648-page volume contains more than 300 true stories written by 144 Forest Service employees and retirees from the turn of the century to the present. The book mentions more than 90 national forests and has 30 old black-and-white Forest Service photographs and references. Price: \$26.95 plus \$2.50 shipping and handling.

Forest Service Humor: More than 300 True Stories contains hilarious stories, yarns, vignettes, anecdotes, and cartoons about people, places, and events that have taken place from 1905 to the present. One hundred forty-six people contributed to this volume, which also contains 66 original cartoons and references to more than 75 national forests. Price: \$24.95 plus \$2.50 shipping and handling.

Memorable Forest Fires: 200 Stories by U.S. Forest Service Retirees contains more than 75 years of fighting forest fires, from 1910 to 1988. Fifty-seven Forest Service retirees contributed to this 506-page book, which has 80 photographs. Price: \$21.95 plus \$2.50 shipping and handling.

All three books preserve the wonderful and unusual stories of an agency that consisted of dedicated, strong-willed, brilliant, loyal, and courageous men and women. Many stories are from early (now deceased) pioneers in the Forest Service, and dozens of topics are covered, from air tankers to wildlife. Free flyers are available on each book. You can also get listings of other books that HiStory Ink publishes.

HiStory Ink was founded in 1992 by Forest Service retirees Gil Davies and Flo Frank. They have edited or written 15 books, half related to the Forest Service and the rest to regional and local history.

History of Potlatch Logging Camps

For those interested in the logging scene in northern Idaho from the turn of the century through the late 1980's, Clearwater National Forest retiree Tom Farbo has just published a 356-page softcover book entitled *White Pine, Wobblies, and Wannigans—A History of the Potlatch Logging Camps*. This book includes more than 400 photographs, as well as maps and descriptions of 185 Potlatch logging camps, flumes, and logging railroads and descriptions of the logger's life. It is available for \$29.95 plus \$4.00 shipping and handling from: Tom Farbo, P.O. Box 1297, Orofino, ID 83544. Phone: 208-476-4829.

Bud Moore Publishes the Lochsa Story

Northern Regional Office retiree Wm. R. "Bud" Moore has just published his book, *The Lochsa Story—Land Ethics in the Bitterroot Mountains* (the Lochsa River drains westerly in Idaho from its Montana border into the Clearwater River). This 475-page book contains 262 photos as well as 13 maps and covers an array of human activity in the Lochsa, from early Indian use through explorers, trappers, and Federal land managers. Moore discusses wilderness ethics and reviews national land use and conservation policies. The book is available for \$20 through Mountain Press Publishing Co., P.O. Box 2399, Missoula, MT 59806. Phone: 406-728-1900 or 1-800-234-5308.



USDA Forest Service Photo

Newly published books

New Book on Civilian Conservation Corps

A new book has been published about the Civilian Conservation Corps (CCC). *In the Shadow of the Trees*, by Michael Schultz, is about two young men, products of Pennsylvania mill towns, who enlist in the CCC. Sent to a camp in northwestern Pennsylvania, they work at environmental projects common to all enrollees stationed nationwide from 1933 to 1942. They soon learn that the forest is a hostile and demanding environment, but they demonstrate an ability to work in circumstances where every individual has a chance for success. Their experience culminates in a great forest fire that tests the young men's physical and psychological endurance.

This story is a homage to the CCC. It is the culmination of 10 years of research, which included author interviews with almost 1,000 CCC vets. The author is a retired teacher who volunteered for the Allegheny National Forest from 1980-1992. The book is published by Dan River Press, and it may be purchased from Barnes and Noble bookstores or from the author (mschultz@nb/net).

Check Out the Forest Service Retirees Homepage on the FSWEB for History

You may not know it, but the Forest Service Retirees Homepage on the FSWEB has a budding history page. To access it, type <http://fsweb.wo.fs.fed.us/programs.html>. Click on the Forest Service Retirees button. You'll see a very interesting color graphic; click on the gate and it will open your world to some Forest Service history. This homepage is well maintained and regularly updated. Enjoy!

Another Forest Service Web Page

The Forest History Society has initiated a Forest Service History web page that already has a budding collection. It can be found at <http://www.lib.duke.edu/forest/usfscoll>. For you history buffs, the Forest History Society just posted an electronic copy of the *1905 Use Book*. Check it out! Also, the Washington Office has an exact replica electronic version that can be sent via Internet, floppy disk, or hard copy. Contact Jerry Williams in the Washington Office.

The Words of Chief Greeley

The Forest History Society's *Forest History Today* in 1997 published two articles about the Forest Service. The first is a 1927 article, "Shall the National Forests be Abolished?" by then- Chief William Greeley. The other, "Minutes of the 1,057th Meeting of the [Forest] Service Committee, March 27, 1924," documents a meeting with Chief Greeley about women Forest Service employees and what could be done to use their knowledge and skills to better the Forest Service and themselves. An enlightening word-for-word set of minutes of the meeting!

Forest Service Featured

The Forest History Society's *Forest History Today* in Spring 1999 published several articles about the Forest Service. These articles include "The Spruce Production Division" by Jerry Williams; "Planting the Seed—the Origins of the Yale Forest School";

"A ... Meeting of Two Yale Foresters in 1908"; "Ah, Wilderness!! But Why?"; "The Thirteenth Fire [Mann Gulch] by Dave Turner of the Helena National Forest; "The Relation of Forests and Forest Fires" by Pinchot (from 1899); "Paiute Forestry or the Fallacy of Light Burning" by William Greeley (from 1920); and "Address ... Approximate Words" [Renaming the Gifford Pinchot National Forest] (from 1949).

New Addition to the Region 3 Museum Collection

The Southwest Region Forest Service museum has a copy of *Bills for Material Accompanying Standard Plans for Buildings on Ranger Stations*, a 42-page book containing plans and bills of materials for 29 buildings, including a 1-room frame ranger cabin, a 5-room log house, a 3-stall frame stable, and 26 other buildings. For a copy of this plan, contact Ken Kimsey at kkimsey/r3,prezscott or at the Prescott National Forest, 344 South Cortez, Prescott, AZ 86303. Phone: 520-771-4700.

New Videos

Aunt Lena, Cabinet National Forest's Unsung Heroine

A video review by Richard Maffeo

Aunt Lena, Cabinet National Forest's Unsung Heroine, is a 28-minute excursion back into time. This historical video, created and produced by Mona Leeson Vanek, is more than a catalog of the lives of those pioneers who settled in the northwestern Montana mountains a century ago. Vanek skillfully weaves tape-recorded conversations of homesteading timbermen (whose stories are narrated by Pauline Reithmiller—better known as Aunt Lena) with an extensive collection of black-and-white photographs. The resulting masterpiece captures the fabric of life in timber towns across America. Their sometimes gruff, always passionate recollections of life in early timber towns draws the viewer's imagination to the very foothills of the Bull River Valley.

As in most logging towns, timber was the only means for these pioneers to make a living. As a result, millions of board-feet were stripped from the land and sent downriver to mills. In an early effort toward forest preservation, President Theodore Roosevelt established the U.S. Forest Service. In 1907, he placed the Bull River Valley under Federal control, creating the Cabinet National Forest in northwestern Montana.

The viewer is treated to a glimpse of the resulting convergence of the U.S. Government and homesteaders trying to forge a life for themselves and their families in the virgin wilderness of the early 20th century. It was not always a gentle meeting. Sometimes forest rangers evicted homesteaders from newly federalized land they had lived and worked on for decades.

This historical documentary (available through Mona Leeson Vanek, Project Manager, 1158 Highway 200, Noxon, MT 59853) is a journey well worth taking. Cost is \$19.95 plus \$5.00 shipping and handling.

Mustangs on the Mountain and *Landscape of History: The Nez Perce (Nee-Me-Poo) National Historical Trail* are two recent additions to the Forest Service video library. Gene Colling, audio-visual production specialist for the Northern Region's Public and Governmental Relations Office, produced and directed the videos.

In *Mustangs on the Mountain*, a band of wild mustangs roams the Pryor Mountain Wild Horse Range in a remote preserve along the Montana-Wyoming border. Some believe these mustangs carry the blood of Spanish horses that date back 400 years. This 15-minute video, produced in cooperation with the Bureau of Land Management Billings (Montana) Resource Area, tells how the Wild Horse Range came to be, how a visionary minister has made the mustangs a lifelong crusade, and what needs to be done to preserve this symbol of the American West.

Landscape of History: The Nez Perce (Nee-Me-Poo) National Historic Trail (18 minutes) highlights the designated trail route and a vision for trail protection. For thousands of years, the Nez Perce followed this 1,170-mile trail across the mountains to visit friends and relatives and hunt buffalo; in 1877, it became a trail of sadness as 750 Nez Perce men, women, and children made an heroic, yet futile, flight as the U.S. Army pursued them. Congress established the National Historic Trail in 1986 to ensure that the route's significant sites be preserved and visited by future generations.

Both videos are excellent for grades 7 through 12 and for adult audiences.

These and more than 120 videos may be checked out for free from the Forest Service video library. The complete library listing is on the Forest Service national homepage, as well as the Pacific Southwest Region homepage (<http://r05s00l.pswfs.gov/video>). Send requests for videotapes to:

Forest Service Video Library
c/o Public Service Audience Planners
5341 Darry Avenue, Suite "Q"
Agoura Hills, CA 91301
818-865-1233

Calling Recreation People

Former Forest Service historian Dennis Roth (now with the USDA Economic Research Service) is researching the history of Forest Service recreation (both wilderness and nonwilderness) management and research. He would like to contact active and retired recreation personnel who might be willing to provide suggestions, oral history interviews, and documents. Dr. Roth is the author of several publications on national forest wilderness history. He can be reached at 202-694-5362. (e-mail Droth@econ.ag.gov). His address is USDA/ERS, 1800 M Street NW, Room 2188, Washington, DC 20036-5831.

Speaking of the Internet—Have Some Forest Service History Fun

Try:

<http://r05s001.pswfs.gov/stanislaus/mgmt/voices>
for a great history homepage!

Thank you Pam Conners!

Region 3 Historian Retires

David Gillio, Region 3 regional historian, retired in December 1997.

The *History Line* Is Looking for Articles

The *History Line* is looking for articles on any aspect of Forest Service or national forest and grassland history. Please send articles to gwilliam/wo or nblair/wo (internal Forest Service) or williams_gerald/wo@fs.fed.us or nblair/wo@fs.fed.us (Internet). If you really want to make the editor happy, send your article on a floppy disk. (Mac readable would be even more wonderful!). Photos and graphics are great if you have them, but are not required.

Mann Gulch Revisited: Missoula Smokejumpers Place Granite Columns Where Firefighters Fell

From articles in Montana newspapers: Great Falls Tribune, May 21, 1997, and The Missoulian, May 25, 1997

On August 5, 1949, 13 firefighters (12 of whom were smokejumpers) lost their lives to the Mann Gulch fire in the Helena National Forest in Montana. Mann Gulch is on the Missouri River, about 20 miles north of Helena.

Forty-eight years later, on Tuesday, May 20, 1997, six Missoula-based smokejumpers parachuted into the grassy gulch to install granite columns where each of the 13 firefighters had fallen in 1949.

A year after the tragedy, in 1950, white concrete crosses, each with the name of one of the firefighters, were placed on the steep slopes—but time has taken its toll. The cast-and-rebar crosses are now weathering and crumbling.

Wayne Williams, smokejumper squad leader at the Missoula Aerial Fire Depot, spearheaded plans to replace the crumbling markers. Contributions came from the Forest Service Smokejumper Welfare Fund, the Intermountain Fire Sciences Laboratory in Missoula, relatives of two of the firefighters killed in the Mann Gulch fire, and royalties from the late Dr. Norman Maclean's *Young Men and Fire*, published in 1992.

Ted Stetler of Missoula's Western Monument Service designed and made the 36-inch autumn-rose granite columns. Each firefighter's name is set in relief. What is left of the original crosses will be allowed to deteriorate naturally.

A 14th granite column will eventually be placed as a memorial to Harry Gisborne, a fire scientist at the Intermountain Station who died of a heart attack on November 9, 1949, while investigating the

Mann Gulch fire. It will be placed further down the gulch, near the Missouri River.

Late-Breaking News—Commemorating the 50th Anniversary of the Mann Gulch Fire

The 50th anniversary of the disastrous Mann Gulch Fire, where 13 Forest Service firefighters died, was August 5-6, 1999. The Mann Gulch tragedy was a major event that shaped the boundaries of modern day wildland firefighting nationwide. Because of the significance of this tragedy and the continued local and national interest in the events that surrounded the Mann Gulch Fire, the Helena National Forest planned several commemorative events. "Mann Gulch Remembered: Honoring Wildland Firefighters" was the theme. The purposes of the events were to commemorate the tragedy, honor those who lost their lives, and acknowledge Mann Gulch's historical importance.

What Happened at Mann Gulch?

On August 5, 1949, at around 6:00 p.m., 15 USDA Forest Service smokejumpers and a Helena National Forest fire guard were trapped by a wildfire in Mann Gulch that started when trees were struck by lightning. Ten jumpers and the forest guard perished that evening, and two jumpers died later from burn injuries. Only three jumpers survived. The jumpers, dispatched from Missoula, Montana, had parachuted into Mann Gulch to help fight a lightning-related fire on the ridge between Meriwether and Mann Gulch.

The plane with the jumpers arrived at 3:10 p.m. Spotter Earl Cooley and jumper foreman Wag

Dodge chose a jump site up the canyon from Mann Gulch. The fire was estimated to be 60 acres, but was still considered routine. The air was quite turbulent, which required a higher than normal approach and caused the jumpers and cargo to scatter widely. The cargo chute containing the radio did not open, leaving the jumpers without outside communication.

By 5:00 p.m., the men had gathered their gear and were eating before attacking the fire. Foreman Dodge left squad leader Bill Hellman in charge and crossed to the south side of Mann Gulch to meet Meriwether Guard James Harrison. Harrison told Hellman to take the crew toward the river on the north side of the canyon and said he would tie in with them later.

Dodge and Harrison caught up with the crew around 5:40 p.m. They had continued down Mann Gulch for about 5 minutes when Dodge noticed the fire had crossed to the north side of the gulch. Realizing the danger, he told the men to head back up Mann Gulch. The wind had increased and the fire was beginning to blow up, burning rapidly toward them in light grass and brush. (During the blowup stage, the Mann Gulch fire covered an estimated 3,000 acres in 10 minutes. It eventually burned 5,000 acres.)

The men had traveled 300 yards when Dodge gave them instructions to drop their gear. Flames

were estimated at 50 feet high and were moving 50 yards every 10 seconds. The men quickly became exhausted due to the steep slopes, high temperatures, and smoke-filled air.

The crew had traversed another 200 yards when Foreman Dodge realized that the fire was going to catch them. Dodge lit an escape fire, hoping it would quickly burn out and allow his men to get into the burned area and survive. For unknown reasons, the crew did not follow Dodge's instructions and continued toward the ridgetop.

Jumpers Walter Rumsey and Robert Sallee followed the edge of the escape fire to the ridgetop, where they escaped the flames and survived. After the blowup had subsided, they found Hellman, badly burned but alive. Wag Dodge, who had survived inside the escape-fire area, joined Rumsey and Sallee and reported he had found jumper Sylvia alive, but badly burned. Dodge and Sallee proceeded down Rescue Gulch to the Missouri River to find help, while Rumsey stayed with Hellman.

A rescue crew arrived on the scene at 12:30 a.m. on August 6. At 1:50 a.m., the rescue crew found jumpers Joseph Sylvia and Bill Hellman. The two injured men were evacuated at 5:00 a.m., but died in a Helena hospital later that morning. Before the day was over, 11 bodies were found. All died within 300 yards of each other.



USDA Forest Service

Loading up and transporting monuments to replace existing ones on the Mann Gulch fire



USDA Forest Service

The new monument is placed next to the old monument. The old monuments will be allowed to deteriorate naturally.

The fatal smoke and flames that roared on that hot August afternoon have long since cooled and vanished. However, the events of the Mann Gulch Fire will be forever be etched in our hearts and will continue to influence wildfire safety and suppression tactics. Today, firefighters nationwide

analyze fire behavior from investigative conclusions and follow the 10 Standard Fire Orders that were influenced in part by the events of in Mann Gulch.

Since that tragic day, families, friends, and colleagues have remembered those who lost their lives at Mann Gulch. In 1950, white crosses were designed and cast in Missoula by smokejumper comrades of those who perished. They were placed in the location where each body was recovered.

Harsh weather and time have made the crosses fragile and crumbled. Respectfully, the Forest Service and the smokejumpers have placed marble plaques next to the original crosses. The memory of those 13 men has been renewed, and the memorials serve as a lasting reminder of all women and men who have served as wildland firefighters, especially those who have paid the ultimate price for that service.

In Memoriam

Stanley J. Reba	Leonard L. Piper
Silas R. Thompson	Eldon E. Diettert
Joseph B. Sylvia	Marvin L. Sherman
James O. Harrison	David R. Navon
Robert J. Bennett	Philip R. McVey
Newton R. Thompson	Henry J. Thol, Jr.
William J. Hellman	

Gifford Pinchot: Forester and Conservationist, First Chief of the Forest Service (Part II)

Jerry Williams, Historical Analyst, Washington Office

This is Part II of "Gifford Pinchot: Forester and Conservationist." Part I appeared in the Spring 1998 *History Line*.

Pinchot, Roosevelt, and the Forest Reserves

On January 7, 1907, President Theodore Roosevelt made a temporary withdrawal of thousands of acres of timberland in Washington State for a possible new forest reserve. A howl of protest erupted from around the State, including the *Seattle Times*, and Senator Samuel H. Piles threatened Federal legislation to remove the withdrawal. Gifford Pinchot, Chief of the 2-year-old Forest Service, and the President yielded to intense lobbying and restored the land to the public domain. Soon thereafter, Senator Charles W. Fulton of Oregon introduced an amendment to the annual agriculture appropriations bill. It passed on February 25. The amendment forbade presidential creation of national forests in the six western states of Washington, Oregon, Idaho, Montana, Wyoming, and Colorado, authorizing Congress alone to establish reserves (Steen 1976:99). Thus, Fulton's amendment took away the President's authority to proclaim forest reserves in most parts of the West, as given by the Forest Reserve Act of 1891. Congress' intent was clear, but Pinchot and others saw an opportunity to get what they wanted. As Pinchot described the event:

It was William T. Cox, now [then] State Forester of Minnesota, who came to me with the suggestion that Roosevelt should save the forest land before the objectionable provision had passed both houses.

When I took Cox's suggestion to him, the President approved it with enthusiasm; the Forest Service was ready (Pinchot 1919:123).

With less than 2 weeks before the act was to be signed into law, Pinchot and his able assistants flew into action:

Thereupon, we set every available man at work drawing proclamations for National Forests in those six states. We knew precisely what we wanted. Our field force had already gathered practically all the facts. Speedily, it supplied the rest. Our office force worked straight through, some of them for 36 and even 48 hours on end, to finish the job. As usual, our people were superb. As the Proclamations were completed, I took them over to the White House. T.R. [Theodore Roosevelt] signed them and sent them to the State Department for safekeeping. And when the job was done, some 16 million acres ... were rescued from passing into the hands of private corporations. Then, and not until then, did T.R. sign the Agricultural Bill [on March 4] (Pinchot 1947:300).

In a matter of a few days, Roosevelt proclaimed over 16 million acres of new or enlarged forest reserves, since referred to as the "midnight reserves" (Pinchot 1919, 1947; Steen 1976). The Fulton amendment, at the suggestion of Gifford Pinchot, also changed the name from "forest reserves" to "national forests" to make it clear that the forests were to be used—not preserved.

The creation of the new national forests in 1907 essentially set the basis for much of the Federal forest system as we presently know it in the West.

The establishment of national forests in the East, for the most part, would have to wait until the passage of the Weeks Act of 1911, which authorized the purchase of private land for watershed purposes. There have been many changes in the names and boundaries of national forests in the years that followed, but the basic land areas that were set aside during Pinchot's and Roosevelt's time are still with us today. The Forest Service presently administers 155 national forests with a net area of 191 million acres.

Pinchot and the Conservation Movement

Samuel P. Hays in his book *Conservation and the Gospel of Efficiency*, effectively summarized Gifford Pinchot's contribution to the national conservation movement: "Without question, the Chief Forester

contributed more than any other individual to the public awareness of forestry...He firmly planted the idea of conservation in the minds of the American people...(Hayes 1959:198)." President John F. Kennedy, at the dedication of the Pinchot Institute for Conservation studies in 1963, referred to Gifford Pinchot as "the father of American conservation." Although that point may be argued, there is no doubt that Pinchot, with the strong backing of President Theodore Roosevelt, made the term "conservation" a household word as well as nation-wide movement:

By Pinchot's own account, it was he who, while riding in the park near Washington in February 1907, had the idea suddenly flash through his mind that there should be a coordinated approach to managing all natural resources. This "new idea" or "brain child" of his then introduced to [WJ] McGee (whom Pinchot acknowledged as a leader of the new movement) and was christened "conservation" by Pinchot's assistant Overton Price, or by Pinchot (USDA Forest Service 1979:6).

Thus, through Pinchot did not invent the term "conservation," he was the first to widely use it and tie it to the politics of the day.

Pinchot Fired by President Taft

Pinchot remained adamant about the need for effective management of national forests. Forest rangers were now hired from Civil Service rolls, rather than by political appointment as during the Department of the Interior days. Innovative methods were tried and new techniques were implemented in the offices and in the "field." The zeal Pinchot displayed in his work as Chief had an infectious influence on Forest Service employees and almost anyone interested in the ideals and practice of Federal forestry. Even his critics often came to admire his strength of conviction in the causes of forestry and conservation.

Ironically, it was the strength of Pinchot's convictions that eventually caused President William Howard Taft (TR's handpicked successor) to fire Pinchot from his job as Chief of the Forest Service. Richard A. Ballinger became Secretary of the



USDA Forest Service Collection, National Agricultural Library

President Theodore Roosevelt

Interior under the new Taft administration on March 4, 1909. Ballinger's changes to Interior's policies and practices immediately brought him into a philosophical dispute with Pinchot, who "regarded his [Ballinger's] whole attitude on conservation matters as thoroughly unsound" (Dana 1956:166). *The Alaska Coal Claims* case was the straw that resulted in Pinchot's dismissal.

Pinchot viewed the processing of Alaska coal claims (which were on national forest land) by the General Land Office of the Department of the Interior as "contrary to the public interest, and probably illegal" (Steen 1976:101). The internal politics of the affair reached the newspapers in late 1909. During the Senate's investigations, Senator Dolliver of Iowa read the Senate a letter received from Pinchot at Dolliver's request. The letter was at least a technical violation of the Executive order forbidding any subordinate to give information to a member of Congress without consent of the head of the Department (Dana 1956:168). Pinchot and Agriculture Secretary James Wilson disagreed on whether Pinchot had such approval. On January 7, 1910, President Taft wrote a letter to Pinchot telling him he was insubordinate:

If I were to pass over this matter in silence, it would be demoralizing to the discipline of the executive branch of the Government...and it therefore now becomes my duty to direct the Secretary of Agriculture to remove you from your office as the Forester (as quoted in Dana 1956:168).

Thornton T. Munger recalled Pinchot's opening of the letters from President Taft and Secretary Wilson on the evening of January 7 at the home of Philip P. Wells, the Forest Service legal expert. Pinchot was invited to dinner and arrived a little late:

He had two envelopes, one opened, the other not. ... Soon after he himself said very cheerfully "This tells me I've been bounced. Excuse me if I try to find the reason." ... During dinner all thoughts were on the matter, and Mr. Pinchot referred to it but always in the most cheerful vein. He said his only regret was for the others whose positions his dismissal might affect (Munger 1962:47).

Thus ended Gifford Pinchot's public career as head of the Forest Service. "The next morning, at the old Atlantic Building, Mr. Pinchot assembled all the Forest Service people and bid them 'good-bye,' saying 'Stick to the Forest Service'" (Munger 1962:47). He was replaced as Forester of the Forest Service by his old friend Henry S. Graves. Several months later, Pinchot wrote a letter to Forest Supervisor Ernest Britten, stating:

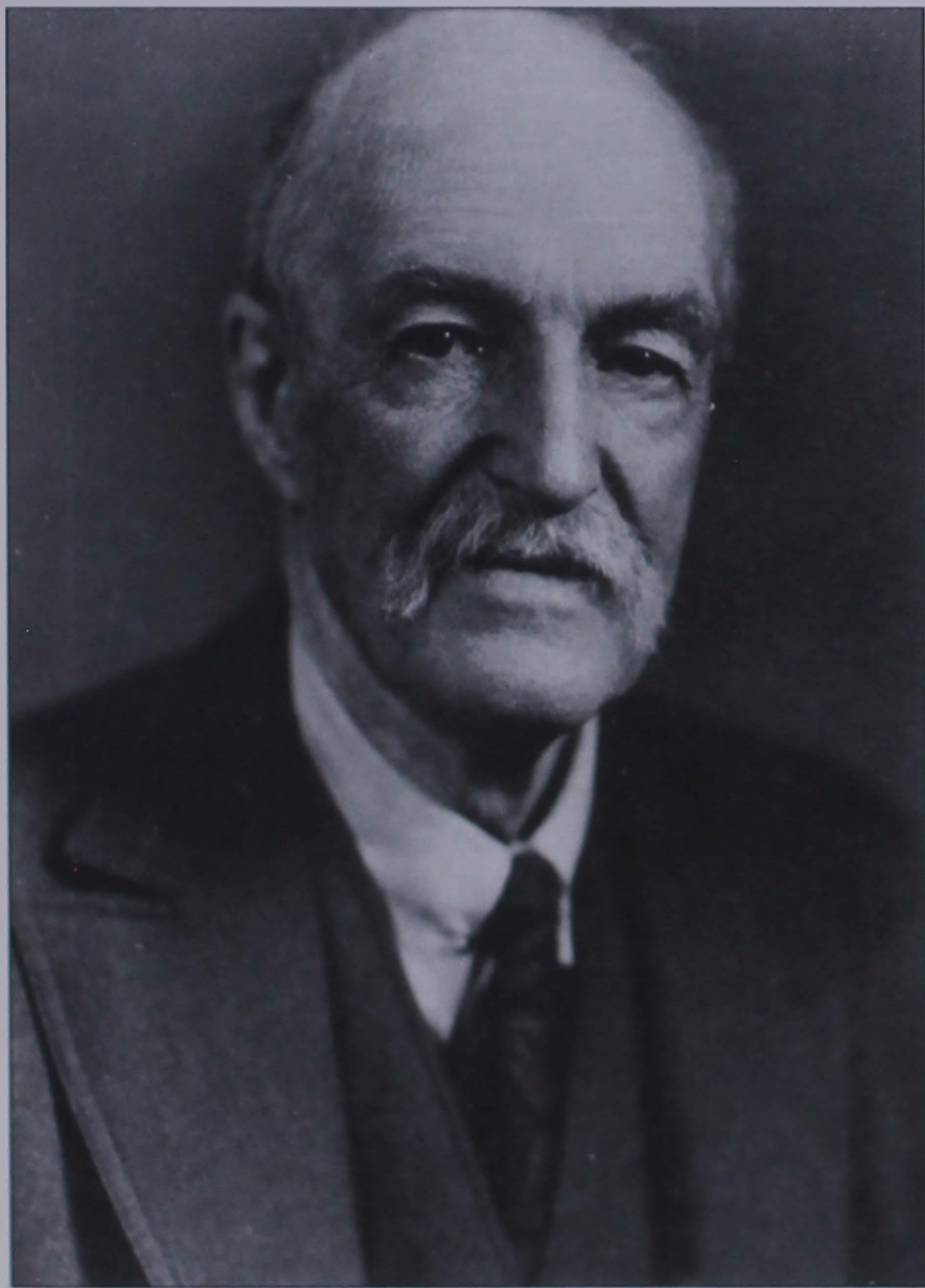
I am counting upon you to stand by the [Forest] Service, and to let nothing that has happened affect your spirit or that of the men under you. The biggest and best thing about the Service is the loyalty of its men. If anyone could make me prouder of the Service and the men of the Service than I am already, it would be to see them make the results of the present year the best that we have every [sic] shown. Nothing could give me more satisfaction than that. Mr. Graves is the one man I would have chosen above all others to take my place. He has sense and courage. With him at the head I have no fears for the Service (Pinchot: 1910:1).

Pinchot Tries Politics

After President Taft fired him, Pinchot continued his strong interest in the conservation movement, as well as politics. Theodore Roosevelt decided to run for President again in 1912, but the Republican Party instead chose Taft for the party leader. Roosevelt formed a third political party (the Progressive Party, commonly called the "Bull Moose" party). The Progressives put forth Roosevelt as their 1912 nominee for President. (It was commonly believed that Roosevelt split the Republican vote, propelling Democrat Woodrow Wilson to the presidency.) Pinchot, as a strong Roosevelt supporter, espoused radical views for the time, including pleas for strict antitrust laws, unemployment insurance, minimum wages for women, and prohibition of child labor. Such ideas had to wait for 20 years and the appearance of another Roosevelt and the era of the New Deal (Forbes 1965; McGeary 1960).

Pinchot was also an unsuccessful Progressive Party candidate for the senatorial seat from

Pennsylvania in 1914, finishing second (McGeary 1957). Returning to the Republican Party, Pinchot ran for governor of Pennsylvania in 1922, an election he won (he served from 1923 to 1927). Pennsylvania, as with some other States, did not then allow a governor to succeed himself. Thus, in 1926, near the end of his governorship, Pinchot tried once again for the senatorial Republican Party nomination but lost the primary. He ran for governor in 1930 on a "dry" Republican ticket and won, serving as governor of Pennsylvania again from 1931 to 1935. In 1934, near the end of his term, Pinchot once again tried for a senatorial nomination, but lost. He tried once again in 1938, at age 73, for the Republican nomination for governor, but he was defeated by a half-million votes (Yingling 1992). This was his last effort at politics.



Forest Service Collection, National Agricultural Library

Gifford Pinchot in later years

It is interesting to note that Pinchot was one of only a very few Republicans to be elected to office during the Depression era of the 1930's when Democrats held almost all political offices. (Cornelia Pinchot, Gifford's wife, ran unsuccessfully for U.S. representative in 1928, 1932, and again in 1936.)

From 1910 to 1925, Pinchot organized and served as president and financial backer of the National Conservation Association, which he formed to continue the fight for his conservation ideals. Pinchot continued his strong interest in forestry for the rest of his life, serving from 1920-22 as commissioner of the Pennsylvania Department of Forestry and then secretary of the Department of Forestry and Waters. During the late 1930's, when Franklin Roosevelt's administration was planning to move the Forest Service back to the Department of the Interior, Pinchot became an outspoken advocate of leaving the agency in Agriculture. Pinchot was vitally interested in national conservation and forestry matters until he died in 1946. His book *Breaking New Ground*, which detailed the years from college to his dismissal by President Taft, was published a year after his death.

Pinchot and the Yale School of Forestry

In 1899 and 1900, after discussion with Henry S. Graves, Pinchot realized that trained practical foresters were needed to manage the national forests. However, there was only one small forestry program at Cornell University, which was under the directorship of Dr. Bernhard E. Fernow (the program closed in 1903 after opposition mounted to clearcutting in the New York Adirondack Mountains). No other colleges or universities in the United States taught forestry as a subject or major course of study. Pinchot noted:

In the end, we saw just one way out. Since the kind of forestry school that would meet our needs did not exist, such a school must be established. And Yale was the place for it. We were both enthusiastic Yale men. After talking it over with my Father and Mother ... the Pinchot family [James,

Mary, Amos, and Gifford] could and would supply the funds to start the school ... in the autumn of 1900 the Yale Forestry School began [with Henry S. Graves as the first director]. The first endowment from the Pinchots was in the sum of \$150,000, later increased to \$300,000 ... Later on, a summer session for first-year students was opened at our place [Grey Towers] at Milford, Pennsylvania (Pinchot 1947:152).

Grey Towers served as the meeting place for the summer session for the Yale Forestry School for the next 21 years. Gifford Pinchot served on the faculty at Yale from 1900 to 1903. He was a non-resident professor of forestry until 1936 and professor emeritus until his death in 1946. Yale honored Pinchot with an honorary degree in 1901, then again with an LL.D. degree 1925. He also received an honorary degree from Princeton (1904), Michigan Agricultural College (1907), McGill University (1909), and Temple University (1931). In 1940, Pinchot was awarded the Sir William Schlich Memorial medal for distinguished service to American forestry by the Society of American Foresters. Pinchot's far-reaching influence on forestry education—

was exerted through those of his immediate associates in government service who, imbued with his fervor and professional philosophy, moved into the educational sector as administrative heads or faculty members of the rapidly increasing list of forestry schools [such as Cornell, Maine, Syracuse, Iowa State, Penn State, Colorado, Michigan State, Minnesota, Washington, and Oregon State] (Garratt 1965:599).

Pinchot versus Muir—Hetch Hetchy Splits the Conservation Movement

Pinchot, in spite of his being fired by President Taft in 1910, kept a very active interest in the conservation movement and the Forest Service. In 1910, he became involved in a heated controversy over the construction of the Hetch Hetchy Dam that split the conservation movement into the “camps” that



Forest Service Collection, National Agricultural Library

John Muir

are still with us today. This “classic encounter ... embroiled him [Pinchot] and other dedicated conservationists involved the first head-on collision between the Pinchot idea of conservation-for-use and the park concept of scenic preservation (Udall 1963:108).”

Yosemite National Park, which had been under the State of California's control from 1864 until it became a national park in 1890, became the focal point of the conservation and preservation movements. In 1901, the City of San Francisco proposed a controversial plan to dam the Tuolumne River in the Hetch Hetchy Valley, near California's famed Yosemite Valley. The project was designed to store and distribute water to the City of San Francisco and adjacent areas. There was considerable opposition to the plan, led by Sierra Club founder John

Muir. Although there were Sierra Club members who favored the plan (Brower 1960), Sierra Club members overwhelmingly voted to oppose the project as it would severely impact the proposed expansion of Yosemite National Park:

The Sierra Club and its leader-founder John Muir had successfully petitioned Congress to add the Hetch Hetchy Valley to [the new] Yosemite National Park in California. San Francisco wanted to develop the natural reservoir site as a municipal water supply. Following the disastrous 1906 earthquake and fire, the city gained enough sympathy and support to wrest the valley away and construct a dam, which Pinchot had outspokenly favored. Muir, once his friend, became a bitter rival who predicted, "We may lose this particular fight, but truth and right must prevail at last: (Steen 1976:114).

Pinchot's strong stand against Muir and the Sierra Club was generally not shared by the public. With the exception of those living in San Francisco, the public tended to side with Muir. The battle over Hetch Hetchy raged for more than a decade before the city received approval for the project in 1913.

In the mid-1970's, however, *City of San Francisco* magazine published a startling proposal. Tom DeVries, a writer from Mariposa, California, proposed that the Hetch Hetchy Reservoir be drained to return the old valley to the national park. His reasoning was that the ancient granite valley was actually protected by the water behind O'Shaughnessy Dam and that within 10 years of draining, the valley would return to near-original conditions. He also thought that the pure water supply for the City of San Francisco and electrical generation could be better supplied downstream from the existing valley and dam. The benefits for recreation would greatly outnumber the continued existence of Hetch Hetchy:

Dry Hetch Hetchy can be what Yosemite Valley isn't: An untouched valley, a haven for the walker, a quiet, easily accessible place for the family to camp. It's also too good ... But protected as it is by all that water, we can have a virgin valley to go along

with the scarred one—a Yosemite II, a recreation resource of untold value and beauty (DeVries 1976:63).

Ironically, in 1987, Secretary of the Interior Donald P. Hodel surprised everyone by also suggesting that the Hetch Hetchy Reservoir be drained, restored to its natural state, and made a part of Yosemite National Park. "But improbable as the idea seems, Hodel's suggestion to ease crowding in the park by creating a 'second Yosemite Valley' has stirred the imagination of people ..." (Morain and Matthee 1987). The proposal has not received wide popular support.

Wise Use versus Preservation

Pinchot's endorsement of using the natural resources and Hetch Hetchy development positions started the split that still exists within today's conservation community. Basically, the question derived from two separate positions: Conservation as wise use versus conservation as preservation. Pinchot was the main proponent of the first position, while John Muir was the principal advocate of the second. Dennis Roth, a former head of the Forest Service History Program, wrote that:

Both positions have value. But if Muir and his followers had prevailed at the turn of the century, I believe that they might have been able to get a new national park, but the total amount of forest land under Federal management would have been much smaller than it is today (Roth 1985: 4).

Pinchot made a number of observations about practical uses of the forests in the 1907 booklet *The Use of the National Forests*. He noted that there were many outside interests, which sometimes "conflicted a little." Pinchot, in true utilitarian fashion, went on to state that "it is often necessary for one man to give a little here, another a little there. But by giving way a little at present they both profit by it a great deal in the end" (Pinchot 1907:25). In recent years, there have been an increasing number of individuals and organized groups that are competing for the resources that the national

forests have to offer. The “give-a-little-here-and-take-a-little-there” method does not seem to work well today, as everyone wants to take, but few want to give.

Pinchot Against Having a National Park Service

Pinchot, both as Chief of the Forest Service and afterward, was opposed to both the establishment of the National Park Service and the conversion of national forests, or portions thereof, into national parks and game refuges under a preservation mode of management (Albright and Cahn 1985; Pinchot 1947; Steen 1976). Although Yellowstone was established in 1872 as the first national park, there was no specific agency to manage the variety of parks and other pristine areas that were being quietly added to the list of Federal lands designated for preservation. By 1916, there were 12 national parks, 19 national monuments, and 2 reservations, comprising a “4.6-million-acre ‘national park system’ that was really no system at all” (Albright and Cahn 1985:32).

Control of the national parks and monuments was generally placed in the hands of the Forest Service, which managed the national monuments, and the War Department (U.S. Army), which managed the national parks. Because of the war with Mexico in 1916, the War Department turned the management of Yosemite and Sequoia National Parks over the Department of the Interior. “In Washington, only two people were officially working full-time on the national parks and monuments: General Superintendent Marshall and Editorial Assistant Bob Yard” (Albright and Cahn 1985:32).

Pinchot, no longer in government service, was opposed to the creation of a National Park Service, although the idea had been around when he was the Forest Service’s Chief Forester.

The opposition of Forest Service Chief Gifford Pinchot continued to carry weight even after he was ousted in 1910 ... when Taft replaced [Interior Secretary] Ballinger with Walter Fisher, many people feared Fisher would oppose the Park Service bill that had first been introduced in 1911, for he was a close friend of Pinchot. Instead, Fisher turned

out to be a strong supporter of the legislation, as did President Taft (Albright and Cahn 1985:34-35).

After going through the normal hearings and markups, the National Park Service Bill was finally signed into law by President Woodrow Wilson on August 25, 1916. However, Pinchot and the Forest Service’s opposition to the bill and the creation of the National Park Service tended to alienate members of the conservation movement concerned with preservation management, such as John Muir and the Sierra Club.

Grey Towers and the Pinchot Institute for Conservation Studies

The 101-acre Grey Towers estate, the former home of Gifford Pinchot, was registered as a national historical landmark in 1963, the same year the Pinchot family estate passed into public ownership. Although the Pinchots had other official residences because of their work in Washington, DC (as Chief of the Forest Service), and at Harrisburg, Pennsylvania (as Governor), the Grey Towers estate was considered home. The three-story main house, designed by Richard M. Hunt based on a Middle Ages French chateau, is constructed of local building stone and adorned with three round towers with conical roofs. Recent renovation work includes removal of an asbestos ceiling on the ground-level rooms installed after the Forest Service took over the building in the 1960’s (1991-92), and the 1997 installation of a new slate roof.

Pinchot wrote much of his autobiography *Breaking New Ground*, published shortly after his death, in his quiet study at Grey Towers. “Following his death in a New York City hospital, his funeral took place on the lawn at Grey Towers according to his wishes, and he was buried in the Pinchot family cemetery in Milford, Pennsylvania” (USDA Forest Service 1979: 9).

The Pinchot Institute of Conservation Studies, located for some 28 years at Grey Towers, was dedicated by President John F. Kennedy in September 1963. David A. Clary, former Forest Service historian, noted that the Institute was established to further the protection and wise use



The library at Grey Towers was an essential working tool for conservationist Gifford Pinchot

Forest Service Collection, National Agricultural Library

of the Nation's resources—"a cause that Gifford Pinchot made his life's work" (USDA Forest Service 1979:ii) The Institute is operated in cooperation with the National Friends of Grey Towers, a nonprofit membership organization that was involved with the transfer of the Grey Towers estate from the Pinchot family to the U.S. Government. The Pinchot Institute has devoted much of its existence to—

conferences on national policies and practices regarding natural resources, seminars on special problems in conservation, courses for educators in the field, and preparation of publications necessary to disseminate instructional information and conference deliberations (USDA Forest Service 1979:29).

Today the Pinchot Institute is located in Washington, DC.

The Pinchot Papers—A Rich Resource

Because Gifford Pinchot was a very public as well as controversial person, he and his family deposited his numerous papers in a public repository. That repository turned out to be the Library of Congress. Today, the Pinchot papers comprise the largest single collection of any one individual's papers in the Library of Congress. The Society of American Foresters (SAF) established a committee in 1939 to oversee and inventory the forestry materials that Pinchot had collected. His papers were donated to the Library of Congress between 1942

and 1962. The collection, which contains about 2 million items, is housed in the Manuscripts Division of the Madison Library.

The collection contains thousands of historically important materials related to the early days of forestry in the United States, and the Forest Service in particular. The Pinchot Papers, which date between 1865 and 1946, contain letters, photographs, articles, and journals pertaining to the early Forest Service and preceding bureaus, as well as Pinchot's terms as Governor of Pennsylvania and his correspondence with scores of people involved with the progressive conservation movement in the United States.

The Pinchot Collection is especially noteworthy in that it contains thousands of pages of information about the conservation movement and the Forest Service that have never been published. This repository of personal letters, stories, books, newspaper accounts, speeches, and memorabilia is rich in first-person accounts from before the turn of the 20th century to the 1940's. No other single source of information about the early years of the Forest Service, outside of the National Archives, is so complete.

Of special importance are the autobiographical accounts, entitled "Personal Narratives" and "Old Timers." Almost 100 "Personal Accounts," which date from 1911 and 1912, were written at Pinchot's request following his firing by President Taft. Most of these were written by the earliest forest inspectors and Department of the Interior employees. The "Old Timers" files, dating from 1937 to 1941, also contain autobiographical information that Pinchot requested as background for his book *Breaking New Ground*. The SAF's "Committee on the History of Forestry" reported that "Governor Pinchot ... is endeavoring to obtain from every living individual who bore a part in that mighty and stirring task while Pinchot was Chief Forester a narrative of what he himself did, encountered, and observed" (Committee on the History of Forestry 1940:132). The over 200 "Old Timers" files hold some 2,300 manuscript pages that have never been published.

The possibilities of this rich collection to expand the knowledge of the conservation movement,

practical forestry, and personalities are almost limitless. The Pinchot Collection is unrivaled in the potential to illuminate the early years of the Forest Service, especially at the organization's local ranger district, or "ground" level.

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Hallie M. Daggett: Early Woman Lookout

Excerpted from American Forestry circa 1914

Although the Forest Service has employed women since 1905, for many decades, it hired very few women to do field work. Yet as early as 1902, during the General Land Office days, wives (who were not employees) sometimes accompanied their forest ranger husbands into the wild forests. One of the first accounts of women employed as forest-fire lookouts comes from California's Klamath National Forest. The lookout, Hallie M. Daggett, worked at Eddy's Gulch Lookout Station atop Klamath Peak in the summer of 1913 (and for the next 14 years). A 1914 article in the *American Forestry* magazine described her work:

Few women would care for such a job, fewer still would seek it, and still fewer would be able to stand the strain of the infinite loneliness, or the roar of the violent storms which sweep the peak, or the menace of the wild beasts which roam the heavily wooded ridges. Miss Daggett, however, not only eagerly longed for the station but secured it [the lookout job] after considerable exertion and now she declares that she enjoyed the life and was intensely interested in the work she had to do. ...

Some of the [Forest] Service men predicted that after a few days of life on the peak she would telephone that she was frightened by the loneliness and the danger, but she was full of pluck and high spirit ... [and] she grew more and more in love with the work. Even when the telephone wires were broken and when for a long time she was cut off from communication with the world below she did not lose heart. She not only filled the place with all the skill which a trained man could have shown but she desires to be reappointed when the fire season opens this year [1914].

[In describing her life as a lookout, Hallie said:] "I grew up with a fierce hatred of the devastating fires and welcomed the [Forest Service] force

which arrived to combat them. But not until the lookout stations were installed did there come an opportunity to join what had up till then been a man's fight; although my sister and I had frequently been able to help on the small things, such as extinguishing spreading campfires or carrying supplies to the firing line.

"Then, thanks to the liberal-mindedness and courtesy of the officials in charge of our district, I was given the position of lookout ... with a firm determination to make good, for I knew that the appointment of a woman was rather in the nature of an experiment, and naturally felt that there was a great deal due the men who had been willing to give me the chance.



USDA Forest Service, Klamath National Forest

Hallie Daggett in elegant attire, suited for her high society adventures in the theaters and opera houses of San Francisco.

"It was quite a swift change in 3 days, from San Francisco, civilization, and sea level, to a solitary cabin on a still more solitary mountain, 6,444 feet in elevation, and 3 hours' hard climb from everywhere, but in spite of the fact that almost the very first question asked by everyone was 'Isn't it awfully lonesome up there?' I never felt a moment's longing to retrace the step, that is, not after the first half-hour following my sister's departure with the pack animals, when I had a chance to look around ... I did not need a horse myself, there being, contrary to the general impression, no patrol work in connection with lookout duties, and my sister bringing up my supplies and mail from home every week, a distance of 9 miles."

More on Hallie Daggett: Hallie Morse Daggett was the first woman to serve as a USDA Forest Service fire lookout. She was hired by the Klamath National Forest in 1913 and served on the Eddy Gulch Lookout for 15 years. She was the daughter of John and Alice Daggett, a pioneer family. Her father was a successful miner who also served as California's lieutenant governor and superintendent of the U.S. Mint in San Francisco.

Hallie was a refined woman educated in San Francisco; however, her deep love of her childhood home at the Black Bear Mine near Sawyers Bar, California, drew her back to the mountains. She learned how to hunt, fish, ride, trap, and shoot early in life—skills that came in handy at the lookout high above the Salmon River.

In her later years (1951), Hallie's home town of Etna, California, built her a cabin on a Main Street lot next to her sister Leslie's home. She lived in this house until her death in 1964. The cabin was donated to the City of Etna by the Rosemary Holsinger family in 1993. The City of Etna, through a volunteer citizen's committee, moved the cabin to the city park and developed an historical interpretive site that was completed in 1996. This project was identified as a priority in the Etna community action plan and was funded by Forest Service grants from President Clinton's Northwest Economic Adjustment Initiative and the Ore-Cal Resource Conservation Development Area. The project was also sponsored by the Native Daughters of the American West.

Camp Pomona: An African-American Civilian Conservation Corps Camp

Mary R. McCorvie, Francis R. Knight, and Elisabeth C. Bernier
Shawnee National Forest

The Civilian Conservation Corps, known as the CCC, was a product of congressional legislation that authorized President Franklin D. Roosevelt's Depression-era proposal for a "civilian forest army" that would employ unskilled young men in conserving the Nation's natural resources. Camp Pomona, constructed to house a CCC company, was the home away from home for many young African-American men between 1934 and 1941—some of the worst years of the Great Depression.

Camp Pomona was subsequently administered by the U.S. Coast Guard, and was used briefly for U.S. Army training maneuvers in 1944 and as a German prisoner-of-war camp for 6 months in 1945.

A 1995 Shawnee National Forest Heritage Program investigated the camp—situated in the rugged, unglaciated uplands of the western Shawnee National Forest in southern Illinois—for inclusion in the National Register of Historic Places (NRHP) and to gather information for an interpretive trail on the site. Archeologists assessed the site's integrity, developed a rationale for the camp's historical and research significance, documented the camp's spatial plan, collected sample artifacts to examine material-culture aspects of government-issued and personal artifacts, and recorded oral histories about the camp and camp life. Two former enrollees were invited to visit the camp to record their histories and help interpret the camp's remains.

Camp Pomona is significant for the National Register for two reasons: First, the CCC and its public works are an important part of the broad pattern of the Nation's history. Specifically, President Roosevelt's New Deal philosophy (of which the CCC was a part) focused on the government's responsibility for the social welfare of its citizens,

and Roosevelt vigorously promoted many programs that provided meaningful and useful work to help those in need during the Great Depression. The second reason is that Camp Pomona provided information about African-American CCC enrollees.

African Americans are one of the many cultural and ethnic groups that have long been marginalized socially and in scholarly research. The study of African-American history in Illinois was virtually nonexistent between 1920 and 1960, a period of intense racial segregation. However, from 1960 to the present, an era which includes the Civil Rights Movement, social upheaval, and advanced educational opportunities for many, the number of publications about African-American history has exploded at the State and national levels. However, in Illinois, these studies generally address issues and topics set in the late 19th or early 20th centuries, or the more recent past, and do not include the decades between 1930 and 1960 (Knight 1993). Consequently, Camp Pomona contributes significantly to African-American history for both Illinois and the United States during the Great Depression of the 1930's.

Historical Overview

Within 8 days of Roosevelt's March 1933 request for a civilian forest army, Congress passed the Emergency Conservation Work (ECW) Act, which was the beginning of the CCC. No new government agencies were established to execute this new conservation program. The Department of Labor administered its enrollment of youths. Typical enrollees, termed "juniors," were between the ages of 18 and 25, unmarried, unemployed with dependents (usually parents), and willing to send most of

their paycheck home. The CCC also recruited unemployed World War I veterans selected by the Veteran's Administration. At field induction centers, enrollees were given medical exams, organized into companies, clothed, equipped, and conditioned for work in the field.

The War Department supervised camp construction, operation, and maintenance, and was responsible for the care, feeding, clothing, and general welfare of enrollees, who occupied more than 2,100 camps during the CCC's 9-year existence. The Forest Service, which was ideally suited for implementing the intended reforestation, fire-prevention, and erosion-control projects, coordinated the work on our national forests as well as on State and private lands.

Only 87 days after President Roosevelt signed the Executive order authorizing the CCC, the proposed full strength of 250,000 men was established at work camps. It is estimated that the CCC directly affected the lives of between 2 and 3 million men from 1933 to 1942, when the CCC was dissolved, and indirectly affected the lives of 5 or 6 times that many.

Camp Pomona and Camp Life

Camp Pomona was activated in late December 1933. It was one of the Shawnee National Forest's 11 camps under Forest Service work supervision. CCC inspectors frequently reported that Camp Pomona was cramped and overcrowded, but a 1937 camp newspaper described the location as "fast becoming one of the finest camps in the entire Jefferson Barracks District" (*The Pomonian* 1937). The camp was expanded at least once and remodeled several times (Camp Inspection Reports 1940-41; Direct Advertising Company 1937). In 1942, when the camp was inventoried before it was transferred to the Coast Guard, it had 21 permanent buildings, 4 portable buildings, and a water tower (U.S. Forest Service 1942).

Camp Pomona was the only CCC camp in southern Illinois that routinely housed an African-American company, and 1 of only 10 in the State that did so (Camp Location and Strength Reports 1933-42). Even so, the camp initially housed a company of World War I-veteran enrollees from

Wisconsin who wintered in southern Illinois (USDA Forest Service 1934). In May 1934, Company 620, with 185 junior enrollees, arrived at Camp Pomona and remained stationed there until its closing in August 1941 (Camp Location and Strength Reports 1934-1942; Direct Advertising Company 1937). Company 620 enrollees were predominantly African-American, but the company also housed a small minority of Euro-Americans until 1936, when racial segregation became more strictly enforced (Camp Location and Strength Reports 1934-42). The African-American enrollees were enlisted from cities such as St. Louis, Chicago, and Detroit, as well as towns in rural southern Illinois. Company strength varied



Mevin P. Twerda

Camp Pomona corpsmen collecting white oak acorns in 1938

considerably from the idealized 200-person company, from a low of 102 to a high of 221 (Camp Location and Strength Reports 1934-42).

During the 7 years it occupied Camp Pomona, Company 620 was active in numerous conservation projects. As with many of the eastern national forests, the Shawnee was not primeval and pristine, but rather one that had been built since the 1930's to clothe and rejuvenate a badly eroded and worn-out landscape—the result of farming and logging on marginal and submarginal terrain and soils. Enrollees participated in this rejuvenation by reforesting the landscape, collecting acorns and other tree seeds, building and staffing fire-lookout towers, fighting fires, opening wildlife clearings and ponds, developing public recreation areas on the forest, and helping with Federal flood relief efforts during the Great 1937 Flood of the Ohio and Mississippi Rivers. Their efforts helped establish the Shawnee National Forest we know today.

Enrollees also constructed and improved the rural infrastructure, such as roads and bridges. Such improvements were often needed to reach the site of an intended project, such as a fire lookout (Camp Pomona Work Projects 1995).

The workday began and ended with formations at the parade ground, but there were other aspects to CCC life besides work details. Food was important to the enrollees, and the mess hall was well staffed with two head cooks, several second cooks, and KP'ers. The enrollees were hearty eaters, and they considered themselves mostly well fed, although the daily rations expenditure per enrollee in 1941 was 41 cents! Dinner was served at 5 p.m., and men were expected to wear their dress uniforms. Good manners were stressed.

The canteen sold candy, cigarettes, soda, and toilet articles; proceeds were used for camp welfare. Athletic equipment was purchased with this money—even a piano. The recreation building was also an important fixture in camp life—a place to play pool, ping-pong, and checkers and listen to a phonograph. Camp Pomona was known for its large and well-stocked library and winning softball team. Other sports included baseball, basketball, and boxing (Camp Inspection Reports 1939-1941; Direct Advertising Company 1937).



Civilian Conservation Corps Logo

Despite the popularity of these activities, perhaps the most important structure in camp was the education building. Enrollees were encouraged to participate in the education program, which included first aid, safety, driving school, mechanics, lumber grading, heavy machine operation, typing, shorthand, and more. One important class taught was basic literacy. In one 6-month period alone, six enrollees were taught to write and read simple prose and newspapers (Camp Inspection Report 1941).

Field Investigations

Field investigations were planned to assess the integrity of Camp Pomona's archeological record, to systematically identify the camp's extent and document its spatial plan, to correlate the remaining building foundations with camp photographs, and to collect a sample of artifacts. Field work was limited to a visual reconnaissance survey (to identify the camp's extent and map its aboveground remains) and the excavation of a 2- by 2-meter test unit at the camp midden.

Camp Pomona's archeological integrity is good. The camp location has been reforested but has not been plowed or otherwise disturbed. Windfalls, which uproot sediment and disturb artifacts and structural remains, have made the most obvious impact in some areas of the camp. No superstructures remain, only concrete foundations. Correlation of the structures seen in camp photographs with the aboveground remains of concrete foundations indicates that some buildings are not represented. These are thought to be those structures supported by pier foundations. The stone-edged, graveled paths that border the parade ground are well preserved. The midden is large and appears relatively undisturbed, with copious amounts of camp-related and personal artifacts. The water distribution and drainage systems still exist below ground. The perennial plants and shrubs, such as daylilies and privet, that the CCC used for landscaping and beautifying the grounds are also of interest. Many of these plants have since gone wild and in some places thickly mask the camp's location. In some places shrubberies outlining a rectilinear clearing may mark the former location of a structure set on piers.

Other than camp photographs, documentary work has so far failed to locate a site plan for Camp Pomona—placing extra emphasis on the archeological record. Although foundations can be identified and mapped, their use cannot always be interpreted. Nevertheless, based on camp photographs, a visit to the camp by two former enrollees, sketch maps prepared by one of them, and the Army experience of one of the archeologists, some of the features, such as the motor pool and yard, mess hall, latrine, water tower, and possibly the shower house, generator house, and others, have been confidently interpreted. Three tower bases at camp entrances were probably related to the camp's post-CCC occupation by the Army (probably guard towers from the prisoner-of-war camp).

Camp Pomona was located on 9 acres of a "benched" ridge. Its east boundary was a road, and its north, west, and south boundaries were deep ravines. The camp occupies three benches of the ridge, with the parade ground on the highest and most extensive bench. These constraints may

be partly responsible for the reports of overcrowding and safety violations at the camp.

Although the number and kinds of camp buildings were standardized by CCC and Army regulations, the terrain of a particular camp often influenced their organization. The parade ground, barracks, and social areas are distinct from the motor pool and yard, apparently for safety reasons. The midden is on the slopes of the ravine to the north, and close to what is probably the mess hall and kitchen. At Camp Pomona, the barracks, social areas, mess hall, and kitchen follow a fairly standard site plan where the buildings border the rectilinear parade ground, with the motor pool and yard extending down the ridge. There also is potential for examining change in the site plan through time. Forest Service and CCC correspondence state that there were modifications in the locations of some buildings and facilities over time, and that buildings were added to the camp late in its occupation. One concrete pad observed in the field was dated November 7, 1939. Potential changes to the site plan should be kept in mind when interviewing former occupants and their recollections of camp at a particular time.

Excavation showed the camp midden to be as much as 80 centimeters thick and containing a generous amount of artifacts, including a truly enormous quantity of coal and clinkers. There was also undecorated thick white ironstone messware, some marked with the U.S. Quartermaster Corps logo and date, as well as thin, decorated, and colored-glaze messware. These articles were shown to the former enrollees who visited the site. They immediately, without any prompting, said that the latter items were probably used by the officers, suggesting status differences between enrollees and other personnel. Large food-can keys, crown caps from soda bottles, and a salt-and-pepper-shaker lid were also collected. CCC medical care was represented by an eyedropper, apparent test tubes, and what appear to be lancets for collecting blood. Buttons, some stamped with the U.S. Army logo; a comb; a brass belt finish; a hammer; and a padlock are other Army-issue paraphernalia. Personal artifacts that may have accompanied enrollees to camp or been purchased at the canteen

include razors, toothbrushes, a pocket watch, soap dish lid, thimble, and 1½-cent tokens. The presence of numerous alcoholic beverage bottles and fragments suggests the CCC regulation against liquor in camp was not strictly enforced, which both contradicts and enlightens the document record.

Summary

Camp Pomona is significant for its association with a broad pattern of the Nation's history and for its potential contribution to understanding history, particularly African-American history. The use of and interplay between archeological and documentary evidence and oral histories produces a more complete and richer understanding than a single data source. Such a study can also be used to address anthropological and archeological questions such as use of space (and its variations through time and space), aspects of material culture, and social relationships.

Morris Charles Butler, one of the former enrollees who helped with the project, summed up the significance of his CCC experience as follows:

They need some more of that. That's what they should be doing now instead of relief. I mean, people aren't working and earning their money that you pay them. That's what they need to do, instead of just giving it to them; make them learn a trade and they'll know how to do something. But if you just give them their money and let them spend it, they don't learn nothing like that.

Times were hard. You could do a lot with a dollar then. It didn't take so much to survive; you could take \$30 a month and you could live pretty good. It was really a good experience for me. I really enjoyed it. I got a lot out of it. I learned how to save a dollar, take care of myself. I learned a lot. I know a lot of people who weren't in there; they didn't have nothin'. It was quite an experience. I wouldn't take nothin' for it. I really wouldn't.

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Walker Mountain Lookout Repairs: A Passport in Time Project (and more . . .)

Leslie M. Hickerson, Deschutes National Forest,
Crescent Ranger District

Perched atop a prominent point of Walker Rim, the Walker Mountain Lookout site has been in continuous use for nearly a century. Walker Mountain Lookout was established sometime between 1914 and 1917 as one of the first four detection stations on Oregon's Deschutes National Forest. Consisting of a stone cabin, lookout tower, garage, privy, and a few other features, the lookout was last used for fire detection in 1993. The ravages of time and limited maintenance have endangered the stability of its buildings. Beginning in 1996, the Deschutes National Forest's Heritage Program has been conducting long-needed maintenance, restoration, and rehabilitation on this group of administrative buildings, including the oldest fire-detection-related structure still standing on the forest.

Walker Mountain, at an elevation of 7,080 feet, is an excellent candidate for human use where a commanding view is desired. Today, the site is covered with a sparse mixture of Shasta fir, ponderosa pine, and whitebark pine, with manzanita, currant, and sparse grasses making up the understory and ground cover.

History

The Deschutes National Forest falls within the former Cascade Range Forest Reserve, which was established by President Cleveland in 1893. The Paulina National Forest was designated in 1903 by Theodore Roosevelt, with its headquarters in Crescent, Oregon (Baker 1949:1). This forest was dis-

solved in 1915 and divided into what are now the Fremont and the Deschutes National Forests. These changes brought the boundary of the Deschutes National Forest to its present location south of the Deschutes-Klamath County line, with Walker Mountain in its extreme southeast corner.

In the early days of the Forest Service, administration of grazing and mining permits, trail building, and fire detection and suppression were priority activities for forest rangers. As often as not, these rangers were the only Government representatives for many thousands of acres of newly established forests. Many early fires on the Deschutes tended to rage along the edge of the desert to the east, where there was no stock grazing. Fires of 10,000 acres could burn in as little as 2 days. Suppression methods consisted mainly of drawing plows at the fire's edge and backfiring the area in between.

First Lookouts

The need to establish lookouts was soon realized. The first three lookouts on the Deschutes were at Pauline (or Paulina) Peak, Maiden Peak, and Walker Mountain. Often, the "lookout" consisted of nothing more than the tallest tree located at the best vantage point. A platform might be built on top of the tree, with just enough room to make sightings and take notes. These platforms were reached with a ladder or by an improvised ladder of planks nailed to the tree trunk. The other important component of the early lookouts was the communication system, which for

Walker Mountain was a "... grounded circuit telephone line ..." that was strung to the summit in 1913 (Merritt 1957).

The first permanent structure at Walker Mountain was a one-room stone cabin built between 1915 and 1917. Given the difficulty in building the cabin, it may have taken two or three seasons to finish. The story goes that Deputy Supervisor V.V. "Vern" Harpham noted the "shellrock" (or shale rock) near the building location and suggested it might save the labor of hauling materials up with pack horses (Baker 1949:20). It may not have been the best decision, however, because water for the cement had to be hauled, and when the sand onsite proved to be useless, sand had to be hauled along with the cement. Apparently, a nearby water source was eventually discovered, but not until construction was complete. However, the lookout now had a sturdy dwelling and remained much like this until the mid-1930's.

Standardized Designs

Curiously, the Great Depression was a period of growth for the Forest Service in terms of the number of facilities and visible employees working in the forest. The construction of administrative facilities was often accomplished with the help of the Civilian Conservation Corps. Structures built included bridges, picnic shelters, cabins, and many lookout towers and related buildings. Throughout the Forest Service a number of standardized designs were developed for these structures. The Deschutes, along with other forests in the Pacific Northwest, benefited from this period of activity. The lookout, garage, and privy at Walker Mountain are no exception and typify the construction styles of the time.

Construction of the tower began in 1932; when finished in 1933, the hip-roofed, L-4 Aladdin-type tower stood 35 feet off the ground, and the cab measured 14 feet square. This replacement for the earlier tree lookout brought up-to-date fire-finding instruments into use, allowing rapid triangulation of fire sources. The original wooden tower legs were replaced in 1979 with a set of metal legs from the Fremont National Forest. The uppermost set of

steps was further altered in the mid-1980's by moving the catwalk access from the outside directly to the interior of the cab through a new trapdoor. According to Ray Kresek (1985:85) the complex at Walker Mountain is "... one of the longest continually operated posts in the Northwest."

The 1942 Forest Inventory of Improvements at Lookout Points indicates that, in addition to the lookout tower at Walker, there was also a 16- by 18-foot one-car garage built in 1934 to the "T-1E" plan. There was also a 12- by 16-foot one-room stone cabin built in 1917 and a standard-sized toilet built in 1933. By 1991, the original toilet had long since fallen over and lost its usefulness. This "necessary room" was replaced at an unknown date with a plywood and fiberglass version. A second, similar toilet was placed nearer the cabin. Another small structure is a galvanized water tank or cistern. It was noted in 1991 as resting on a set of pole legs that were collapsing.

The last structure is curious because its true function has yet to be determined. It is a wooden plank box set into the ground in an obviously excavated spot. The rocky soil is bermed around this feature on two sides. A cover is nailed across the top; access is gained through a small square opening. This opening is covered with a wooden lid attached with a single iron pivot. Presently, there is an accumulation of modern trash in the box, although whether this is its originally intended function remains to be seen.

A number of ancillary structures complete the site complex. These include a carved wooden lookout sign placed near a flagpole that pivots on a short post. A stacked stone monument of an undetermined function is located near the flagpole. The split trunk of a tree was notched to hold a horizontal plank-seat situated near the stone cabin. There is a sizable can dump near the cabin.

Nomination to National Historic Lookout Register

The Forest Service began leasing portions of the Walker Mountain summit to other users for radio and television communications in the 1960's, and

by 1971 it was officially designated as an electronic communication site (LRMP 1990). Further development was studied during an environmental analysis completed in 1982 and finalized with a Decision Notice and a Finding of No Significant Impact that directed the preparation of a management plan providing orderly and environmentally sound development. The same basic users remained there until the mid-1990's.

When Elizabeth Sinclair conducted a National Register eligibility assessment of Deschutes National Forest lookouts in 1991, she determined that the Walker Mountain site, even with the alterations on the lookout, was eligible. In 1994, a proposal to increase the height of one tower was initiated, leading to a review and ultimately a revision of the 1982 management plan. Because of the eligible historic property and visual quality concerns, a limited number of facilities was preferred. Through consultation with the Oregon State Historic Preservation Officer, a Memorandum of Agreement (MOA) was negotiated that allows the Deschutes to meet its section 110 responsibilities and to mitigate the Finding of Adverse Effect from the electronic equipment.

The MOA proposed stabilizing, rehabilitating, and interpreting the site (Sinclair and Claeysens 1994). Part of the agreement states that the original collapsed privy be removed. Nonconforming structures would also be removed from the lookout tower (there are two microwave dishes attached to the tower legs). Also agreed to was the eventual removal of communications buildings and towers from the southern portion of the summit, south of the stone cabin. This has the effect of consolidating the electronic equipment and towers to the north of the lookout and retaining the historic character on the summit south of the lookout.

In early 1996, the lookout was placed on the National Historic Lookout Register (not to be confused with the National Register of Historic Places) after being nominated by the late Ron Johnson, Oregon Director of the Forest Fire Lookout Association. This status confirms the site's importance and argues well for its continued care and maintenance.

Rehabilitation Efforts Begin

Efforts to rehabilitate the site complex began in June 1996 when Leslie Hickerson hosted a Youth Conservation Corps (YCC) crew for a day. This small group was able to dismantle the privy, sort the pieces for "recyclable" material (especially the larger boards), and store the reuseable parts in the garage. The crew also cleaned up some of the dead-fall branches and limbs around the buildings and straightened the rock-lined pathways.

In July 1996, the aid of district recreation folks was enlisted to help bring a replacement privy to the site. This privy was built about the same time and was at a former administrative site elsewhere on the district. The rest of the buildings on that site, including a residence and garage, were sold to private owners in the 1970's, leaving the toilet as an "orphan." A backhoe was used to lift the orphan privy onto a flatbed trailer for transport to the summit. The only hitch came when the transport could not make one of the steep, narrow turns. After a little bit of shuffling, the backhoe was offloaded and the transport turned around. Once on the summit, everything worked in reverse, and the two privies were quickly placed in their new locations. After a bit of work to anchor the new privy to the ground, it looked as if it had always been there. At this point, work at Walker waited while a 1997 Passport in Time (or PIT) project was developed to continue the rehabilitation efforts.

Passport in Time (PIT) Projects

Before the actual PIT project began in July 1997, a YCC crew helped gather and move a very large pile of donated cedar shakes for the cabin roof. With the help of a summer Heritage crew, they managed to haul three loads of shakes up to the cabin in 1 day. (The YCC kids admitted it was a lot of 'shaking and moving'—especially without music!)

Two district firemen were then recruited to help prepare the garage for painting. A pressure washer was used to remove flaking and peeling paint from

much of the building (this method was chosen because lead-based paint was suspected; it also caused less paint dust and was quicker than using dry scrapers and wire brushes). The bulk of the paint was removed in less than 2 days. Interestingly, one of these firemen, Ken Coffman, was the last regular lookout to work the tower in 1993.

By late July 1997, the first of two PIT crews arrived. There were enough people to start painting the garage and to work on the cabin roof. The old roofing material on the south side was removed first, as it was the most in need of repair. After the shakes were removed it was apparent that some of the rafter poles and furring strips would also need to be replaced. Rough-cut boards were used to replace the furring strips (the horizontal boards to which the shakes are nailed), and a suitable downed pole nearby was used to replace the broken rafter pole.

In addition to the old roofing, the recent additions to the cabin were also removed. The power company had already taken the power line and cable out. More recent alterations, such as a plywood ceiling over an earlier tongue-and-groove ceiling, were also removed. The cabin had been electrified sometime after the 1930's, and contained a nonconforming element consisting of the conduit, a wall outlet, a ceiling lamp socket, and a switchbox. The power line was guyed to one of the rafter poles, causing it to sag; this, combined with a too-short furring strip, was causing the roof to decay and would have eventually caused more rafters to fail. The new roof looked more durable than the one that was removed. Judging from the number of nail holes in the furring strips, the shakes that had been removed were likely not the originals, either.

One enthusiastic volunteer really got into removing the two ceilings, suiting up with dust mask and safety goggles and brandishing both a sledge and claw hammer to make swift work of it. The built-in plank cupboard, assorted trash from the fireplace, and two large pack-rat nests were also removed. This made a great difference in the feeling of the interior space. The rafter beams were now exposed, allowing one to see up to the roof peak. Next, the porch was removed so work could



USDA Forest Service, Deschutes NF photo

Walker Mountain Lookout Historic Site. Stone cabin circa 1917 receives a new ridgecap after new shakes are placed.

continue on the roof. Although the 1933 panorama photographs indicated a porch on the front of the cabin, it had been altered somewhat during 1964 when a concrete floor and porch step were installed. Plans are to replace the porch once the concrete step is dealt with—if not the interior floor. Because of concern over the cabin's structural stability, neither of these alterations has been removed yet.

In addition to the roof repairs, a lot of time and effort was spent on with the wood-framed windows, many of which had cracked glass panes. The windows were removed from their frames and labeled for replacing in their original locations. After many layers of old paint were scraped, it was determined that the windows' earliest color was probably white. The glass was also carefully removed, and reuseable panes were labeled with their origin so they could be replaced into their original frames. The cabin has five windows arranged one per side, except on the north, where there is a paired set. The exception to a fairly uniform-sized window is on the west, where the window is slightly smaller than the frame. Perhaps the original builders miscalculated the size, or a repair had to be made and only a smaller window was available. Either way, it was kept as is. The

south window was missing, although it was there in 1993. It is being replicated by district facilities staff with a donated woodframed window of similar appearance, and was installed later in 1998.

The cabin is also in need of a door. No records have been found that show what it would have looked like originally. Some of the PIT volunteers suggested it may have been a plank door with a "Z" brace if it was manufactured onsite. Photographs from the mid-1960's indicate a standard five-panel door typical of the 1930's. Immediate plans are to salvage a door from a condemned building at the Crescent Ranger District compound and use it for the time being.

By the time the roofing was completed, the tireless painting crew was more than half done with its job. Juggling ladders, paint cans, and brushes, they applied nearly 5 gallons of primer and an equal amount of green paint to this thirsty building. Although the garage appeared to never have had a primer coat, it seemed to be a good way to preserve the siding for even longer. The primer is not visible and does not change any of the building's original character. The local paint vendor was even able to replicate a Federal Government shade of sage green, very close to the original.

Toward the end of the second week of the PIT project, almost all the planned work for the cabin was complete, minus reinstallation of glass and replacing of windows in the frames. The crew completed painting the garage, did some minor repairs to the privy, and painted most of it with primer. Future efforts will focus on replacing porcupine-chewed boards and flooring in the privy. The crew will finish painting it and install a replicated seat generously donated by an assistant district fire management officer. The Walker Mountain Lookout sign, newly spiffed up with paint by another district recreation volunteer, was also remounted.

Perhaps the ultimate highlight of the 2-week volunteer part of the project was the surprise visit from Steve Coady, a Willamette National Forest employee. Steve has taken on the personality of early ranger Corley McFarland, who began his career on the Deschutes National Forest in the 1920's and retired to Oakridge, Oregon. During lunch this gentleman, dressed in olive drab and

khakis complete with campaign hat and puttees, strolled into the group's midst. Asking if anyone had seen his string of mules, he said he had been scouting the Walker area for forest fires, and that the beasts had been frightened by thunder and lightning. It took the volunteers only a few moments to realize they were being fooled, but the effect was well worth the effort. "Corley" graciously displayed the authentic gear from his knapsack, including his compass, map, water flask, linen napkin, and binoculars. Luckily, there was good weather for his visit, even if the mules did not like it.

Future Plans

Future plans for the site include replacing a pair of sill beams on the garage that have rotted from moisture, putting a new shingle roof on the garage, and possibly applying a second coat of green paint for extra protection. The privy rehabilitation will also be finished, and a door will be installed on the cabin. If time permits a small stone retaining wall might be built next to the garage's west elevation to allow better drainage. The curious square wooden box will bear some investigation in hopes of discovering its true function.



USDA Forest Service, Deschutes NF photo

South side of Walker Mountain cabin, September 1997. Cabin repairs completed; building closed for the winter.

The district fire and facilities departments are working on plans to rehabilitate the lookout. These include replacing the catwalk and railings and retrofitting the plywood shutters to their original style. This work will be tricky because of the 35-foot distance to the ground, and may involve some combination of Forest Service employees, contractors, and volunteers to accomplish it all. But that's another story.

I believe our efforts to date have increased the lifespan of the historic Walker Mountain Lookout site by at least another 80 years. These efforts may also allow the cabin and lookout to be rented to recreational visitors. We hope they will appreciate the various efforts of our 'extended family' of Heritage Team members, District employees, YCC kids, and dedicated Passport in Time volunteers.

1998 Update

During the 1998 season a number of volunteers and Forest Service employees and a professional carpenter continued to work on the 1930's privy and garage. We revamped the privy by placing it on an improved footing of treated material and replacing some sill beams, studs, flooring, and siding. We primed and painted the exterior and most of the interior and installed a new seat. Plans are to replace the cedar shingle roof next season. The garage received additional footings around its perimeters, two replacement sill beams, a new diagonal brace, and a thorough cleaning. This last effort made a dramatic difference in the interior appearance! Before there was all sorts of scrap metal, 12-volt batteries, unused lookout shutters, old bedsprings, abandoned paint and solvent cans, and the inevitable residue of old packrats inhabiting the building. After hauling at least two 1-ton truckloads of "stuff," there is actually room to store the cedar shingles for 1999's main job—reroofing both the garage and privy. Thanks to another great volunteer crew and numerous other

helpers, we're that much closer to a well-maintained historic lookout site.

Editor's note: The *History Line* will provide updates on the Walker Mountain project's progress.

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The Modoc's Applegate Emigrant Trail and Basque Aspen Art

Gerry Gates, Modoc National Forest, Pacific Southwest Region

This past field season saw two historic activities on the Modoc National Forest in the northeastern corner of California: an archeological inventory of the 1846 Applegate Emigrant Trail, and a continuing inventory of Basque aspen art in the South Warner Mountains.

The "Emigrant Trail Inventory" included on-the-ground field verification of the locations of the 1846 Applegate Trail and the 1848 Lassen Trail and Road. These trails are all part of the California Historic Trail System designated by Congress. As part of the Modoc's ongoing efforts toward the State of California Sesquicentennial Celebration, we expect to inventory 90 miles of emigrant trails across the Modoc. The Applegate Trail is unusual in that it was blazed from west to east, from the Willamette Valley in the Oregon Territory to Ft. Hall in Idaho, where it joined the Oregon Trail.

Through historic research and emigrant diaries provided by Richard Silva of the Oregon-California Trails Association (OCTA) and General Land Office (GLO) survey plats of the 1870's, Criss Duncan (University of Oregon), a seasonal archaeologist, and Scott Atkison (Australia), an International Volunteer, were able to plot most locations of the trail. However, one 3-mile segment was not observed by the GLO surveyor in 1871. This missing segment was the focus of a Passport in Time (PIT) project that allowed the public to help Forest Service archeologists attempt to locate the missing trail. Fourteen PIT and OCTA participants used metal detectors to find a "debris trail" that would identify the old wagon road. Their effort was very successful, and the missing 3-mile gap was closed.

The metal detectors were used to locate historic artifacts such as numerous square-cut nails, older "Rose-head" hand-wrought nails, oxen shoes,

horse and mule shoes, horseshoe nails, hand-forged nuts and bolts and other miscellaneous forged metal parts, and two .44- and .45-caliber unfired balls from a "cap-and-ball" type pistol and a single .52- or .54-caliber unfired ball from a rifle. Once the metal detectors were "off" the trail corridor, there was a total void of historic cultural materials.

When on the right track, based on the "debris trail," volunteers could see some very subtle depressions, or traces, of the trail. The reason for the "missing trail" is actually quite simple. In this portion of the Devil's Garden, as described by Major John Green in September 1872, this area is "... the worst piece of rocky country on the top for the ground—for miles neither wheel of wagon nor foot



This 1903 silvaglyph is one of the oldest found in the South Warner Mountains of California's Modoc National Forest

USDA Forest Service Photo



USDA Forest Service Photo

Basque tree art consists of designs and poems that Basque shepherds carved into the bark of live aspens. They included human figures and other designs



USDA Forest Service Photo

of horse ever touched the soil. Ground covered with loose round rocks as thick as they can be planted—a Devil's Garden of the most approved type." The thickly planted rock prevented the formation of observable "ruts" and "traces" that are common elsewhere along the trail. Yet the majority of artifacts recovered were from below the surface—they were able to, with the help of time and natural elements, sink between and below the rocks.

The second research project, in partnership with Dr. Jose Mallea-Olaetxe of the Basque Studies Program at the University of Nevada, Reno, was an ongoing inventory of Basque aspen tree-carving art. During the 1997 field season, Sarah Workman (Florida State University), a seasonal archeologist, and Kirsti Bambridge (England), an International Volunteer, relocated and formally recorded more

than 20 stands of aspen containing many examples of Basque tree carving dating from the 1890's to 1974. During the 1996 field season, Dr. Mallea-Olaetxe identified the aspen art in this area and videotaped many of the carvings and also provided an interpretation of them.

Sometimes called the "Mountain Picassos," Basque tree art consists of designs that Basque shepherds carved into the bark of live aspens. Such carvings are rare in the Basque homeland, and the artform may have originated in the United States as a way to pass the time in the lonely mountain meadows and valleys. The carvings, by both Spanish and French Basques, include names and dates, short dialogs and poems, longings for home and girlfriends, human figures and other designs, and sometimes long narratives in the native Basque language. The Basque shepherds were



USDA Forest Service Photo

Some areas on the Modoc National Forest contain more than 100 aspen trees, with thousands of designs carved into them

generally contracted employees who worked in the United States for anywhere from 2 years to 10 years. Many returned to their beloved homeland,

but many also stayed in the United States, becoming citizens and prominent individuals, such as Paul Laxalt, former governor and senator from Nevada, and his brother Robert, a noted author.

According to Dr. Mallea-Olaetxe, the area of the South Warner Mountains on the border between Modoc and Lassen Counties is one of the richest areas of Basque aspen art in the West. It is estimated that there are more than 100 aspen stands or groves, containing thousands of carved trees and designs. Unfortunately, this art form is lost as aspen age and die. The Modoc's goal, in partnership with the Basque Studies Program, is to locate, record, and document this rich folk art before it is lost forever. This will be a multiyear project, and it is still in its early stages.

For more information on either of these two projects, please contact Gerry Gates, Heritage Program Manager, Modoc National Forest, 800 W. 12th Street, Alturas, CA 96101.

Elk City Wagon Road: A Scenic Drive Through the 1880's

Laura Smith, Visual Information Specialist, Nez Perce National Forest, Grangeville, Idaho

Traveling the Elk City Wagon Road (ECWR) in Idaho can be an exciting, imaginative adventure. You'll travel a road miners and freighters took to the gold fields of Elk City. The ECWR begins at Harpster, a small town on the South Fork of the Clearwater River. From Harpster it is a scenic 53-mile trip to Elk City.

The route is marked at each mile and road junction with brown-and-white ECWR posts. Five interpretive signs help tell the story of 100 years of history. The ECWR brochure contains maps locating 29 points of interest, with mile points and historical descriptions. Here are some samples of the information detailed in the brochure.

Harpster: Established in 1893, Harpster was the first full-service stop for wagons on the ECWR. During its boom years, the town grew famous for its dill pickle business, which supplied pickles to mining camps.

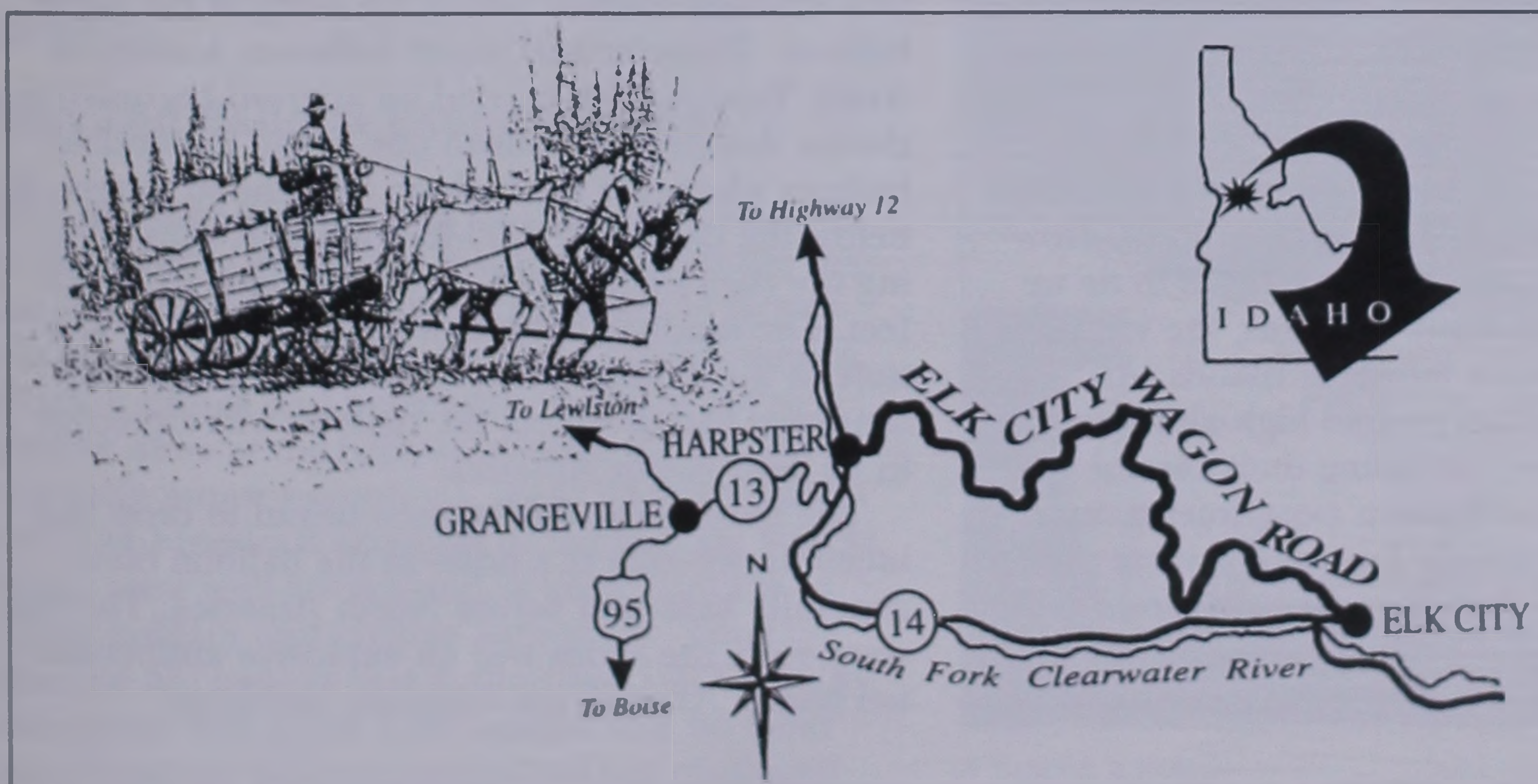
Switchback: From 1894 to 1934, the Switchback station provided beds and meals for freighters.

Mountain House: For 37 years (1895 to 1932), this station provided lodging for freighters, especially when deep snows blocked the wagon road.

Newsome: From 1892 to 1924, Newsome was known to wagon-road travelers for a fine hotel with excellent cuisine. Other buildings included a post office, barns, a bar, and a morgue.

Elk City: Established in 1861 by gold seekers, this was the town the road was built for. Here wagons unloaded their freight for the mines, then departed for the next load. Several historic buildings remain.

The Elk City Wagon Road brochure and interpretive signage along the road were funded by the Idaho Centennial Commission, the Idaho Centennial Committee, and the Nez Perce National Forest. Individual members of Friends of the ECWR donated time, materials, and money to the projects.



Map of Elk City Wagon Road

Balloon Bombs of 1945: The Japanese Intercontinental Threat

Edward G. Heilman, National Forest Service Museum,
Missoula, Montana

The first recorded intercontinental weapons were the more than 9,000 paper-balloon bombs launched from the main Japanese island of Honshu from November 1944 through April 1945. Although 1,000 of these balloons reached North America, only 342 were ever sighted or found. Some of those that reached North America but were never found could conceivably surprise or injure a future discoverer.

Although the Japanese army began experimentation with unmanned balloon-borne weapons as early as 1933, this program was not actively pursued until the spring of 1942. Military historians believe the surprise air raid on Tokyo, led by Lt. Col. Doolittle, may have been one of the reasons for the renewed Japanese interest in the unmanned balloon-bomb program.

With most of the Japanese military committed to campaigns in mainland Asia and the South Pacific, the reborn, unmanned balloon program, code-named FUGO (an acronym that means a "wind ship weapon"), was revived as a possible retaliatory weapon against North America.

The Japanese army originally decided to prepare 100 balloons to be launched from submarines a few miles from the North American coast. However, because the Japanese navy refused to tie up submarines to launch army balloons, the weapons were launched from the Japanese islands. Although the Japanese had studied high-altitude winds for many years, including their careful application of data from Russian experiments, in 1942 it was not definitively known just what the best altitude would be to carry balloons from Japan to North America. (Although it should be noted that in 1942 Japanese knowledge of these high-

altitude west-to-east winds, later to become known as the jet stream, was far more advanced than that of the Allies.)

To determine the most effective altitude for balloon transport, the Japanese navy launched 40 silk/rubber (type B) balloons beginning in February 1944. None of these carried weapons, but all carried radiosonde units that measured air temperature and barometric pressure. Three of these type B unarmed weather balloons were eventually recovered in or near North America. From that data, the Japanese determined that the best altitude for balloon transport was 30,000 feet and that the average flight time to North America was about 3 days.

This led the Japanese army to design a slightly larger (10-meter diameter) paper balloon that carried both explosive and incendiary devices. The weapons and ballast were carried around the perimeter of a horizontally suspended wagon-wheel-like structure carried below the body of the paper balloon. These armed paper balloons, known as Army Type A, also carried an aneroid barometric device designed to jettison one of the 32 sandbag ballasts whenever the balloon descended too much below the desired 30,000-foot altitude, thus allowing the then-lighter balloon to rise back to 30,000 feet. The sandbag ballasts were dropped one at a time as the balloon blew eastward. When all the sandbags had dropped, the balloon was expected to be over North America.

The barometric device then began to drop four incendiaries—one at a time—as the balloon blew generally eastward across North America. The last weapon in the series was an explosive antipersonnel bomb. After all the weapons had been

dropped, a small explosive/incendiary charge was supposed to destroy the balloon mechanism and paper bag, leaving practically no evidence of its presence.

More than 9,000 of the Army Type A paper balloon weapons were launched from Honshu between November 1944 and April 1945. These balloons were recovered in North America from Alaska to Mexico, and as far east as Michigan. Forty-five were recovered in Oregon—the most in North America. In all, 342 were eventually sighted or recovered. No one knows what happened to the rest.

Why Drop Balloons?

The intent of the balloon program was to start massive forest fires in North America. However, the timing of the launches from November through April (believed to be the time of the most favorable high-altitude winds) was winter, so the net result was only one recorded fire—ironically, caused by a balloon-induced arcing power line at the then-supersecret atomic works at Hanford, Washington.

Sadly, the only World War II fatalities from enemy action on the mainland of North America occurred May 5, 1945, in Bly (near southeastern Oregon's Fremont National Forest), when a church group encountered one of the explosive bombs from a balloon. The resulting explosion killed six people.

Why Did Balloon Launches Stop?

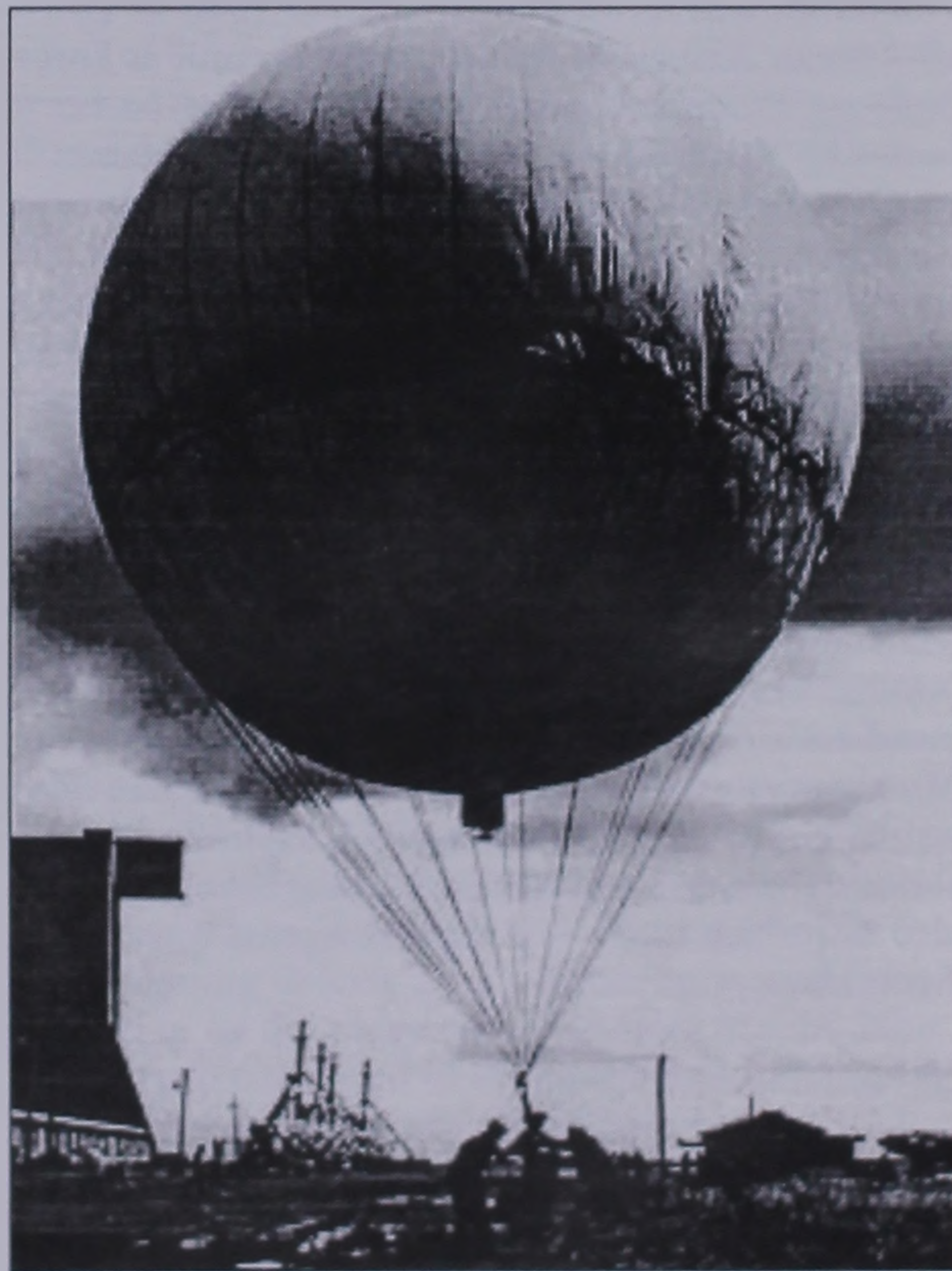
Why did the Japanese stop their balloon launches in April 1945, just as the North American fire season was about to start? A combination of factors was involved: Somehow, the Allied authorities in North America had persuaded the press *not* to publish news of the balloon attacks. With a few relatively minor exceptions, there were no published or broadcast accounts of the balloon attacks, which were well known and of great concern to Allied military and civilian authorities. The Japanese did not believe that authorities could actually silence our free press, and thought that no news meant that the balloon attacks had not produced

significant results. Another major factor in Japan's decision to discontinue the balloon attacks was the damage U.S. air raids had done to Japanese industry. Because of bomb damage to Japanese gas plants, the hydrogen gas needed for the balloon program became scarce.

Concern About Balloon Attacks

Allied authorities were extremely concerned about the potential for major damage from balloon attacks. The fire potential in the United States was to be dealt with through a sizable military supplement (known as Operation Fire Fly) to the regular civilian firefighting force, which was much reduced by other wartime demands.

Perhaps the major concern of the Allies was the potential for biological warfare from balloon-borne



A balloon bomb

organisms. Fortunately, this did not occur, but another sizable Allied effort was mounted to monitor potential disease outbreaks.

A little-known and seldom reported variation on the World War II balloon attacks was a British effort to launch balloon weapons against German-occupied Europe. The British discontinued their balloon attacks when some of their balloons came down in neutral Sweden.

In the end, the Japanese balloon attacks—the first intercontinental aerial weapons—were of little strategic significance. However, they had the potential to cause widespread damage from fire and biological weapons, and they did tie up a considerable Allied effort that might have been assigned elsewhere.

A Little More About Operation Fire Fly and the 555th

The 555th was formed in November 1943 as an all-African American Army paratroop unit at Fort Benning, Georgia, under the command of 1st Lt. James H. Porter. It was expanded to full battalion size November 1944 at Camp Mackall, North Carolina.

In April 1945 the 555th was assigned as a 300-man smokejumper component of a larger 2,700-person military effort group assigned to Operation Fire Fly in the Forest Service's Northern, Intermountain, Pacific Southwest, and Pacific Northwest Regions. Fire Fly was organized as a massive civilian/military effort to combat the expected wildland fire threat from the Japanese balloon bombs, which had been arriving in increasing numbers along the West Coast (and as far east as Michigan) since August 1944. Although it was not public knowledge at the time, U.S. officials were seriously concerned that the balloon bombs would also introduce biological warfare agents into North America.

In their assigned smokejumper role, the 555th was based primarily at Pendleton, Oregon, and Chico, California. The 555th also made jumps from other temporary bases. During its Fire Fly assignment (April to October 1945), the 555th made 1,200 jumps and helped suppress 36 fires. The 555th was deactivated on December 9, 1947, and most of its remaining personnel were reassigned to the 82nd Airborne Division.

These articles were originally printed in the National Forest Service Museum News Letter. For further information contact Edward G. Heilman, Newsletter Editor, P.O. Box 2722, Missoula, MT 59086.

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Some Unexpected Applications of Science in the Lindbergh Kidnapping Case (Or How the Forest Service's Forest Products Laboratory Helped Solve the Lindbergh Kidnapping)

The following is an abstract of a 1936 article prepared by Arthur Koehler for Biological Abstracts on the ladder used in the Lindbergh kidnap case.

The interrelationship of the sciences with everyday affairs can be illustrated in numerous ways. One only need be reminded of such examples as the discovery of helium gas on the Sun before its discovery on this planet, and of the discovery of x-rays while studying electrical discharges through gases of different kinds to appreciate what a tremendous influence scientific work has on our well-being and progress.

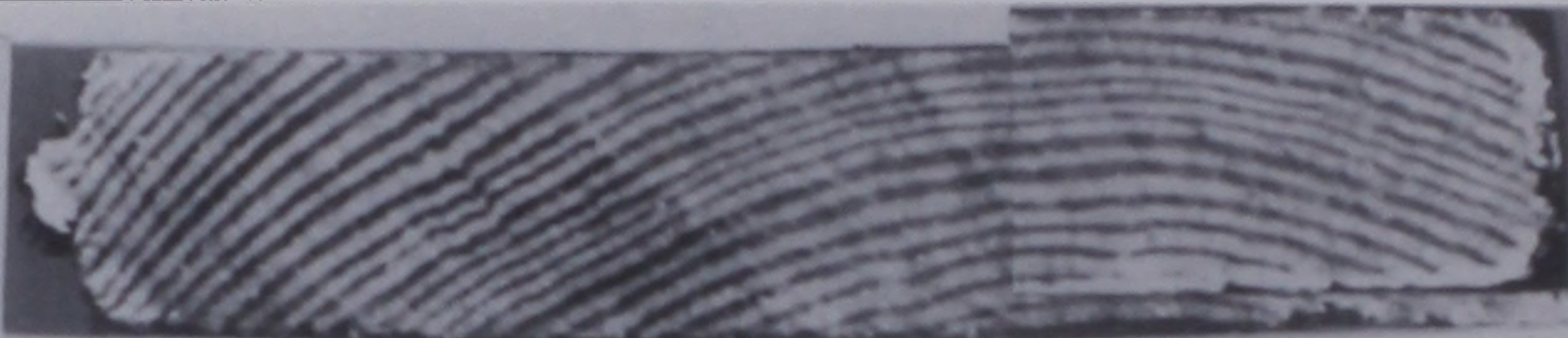
I can cite several examples, although not so far-reaching in importance, from my own work in wood technology, which is the science that deals with the structure and properties of wood. For example, the observation that certain types of abnormal wood shrink excessively along the grain (in normal wood, the longitudinal shrinkage is negligible) led to the discovery that there is a definite relationship between the degree of natural spiral twist that all wood fibers have and the shrinkage along and across the grain—as one increases the other decreases.

When the ladder used in the Lindbergh kidnapping was turned over to me for examination, the question arose as to whether the 1- by 4-inch North Carolina pine uprights, or rails, in the bottom section of the ladder were originally planed to 3-5/8 or 3-3/4 inches in width. The mills in South Carolina, to which I had traced the rails, made ship-

ments of both widths, and in order to follow the right shipments from the mill, I had to know which of the two was the original size of the ladder rails. When I first examined the ladder, I found the rails measured more nearly 3-5/8 than 3-3/4 inches wide; in fact, one end was nearly 1/32 of an inch scant of 3-5/8 inches, and the other end was much wider. The question was, were the rails originally dressed to 3-3/4 inches in width and had shrunk subsequently, or were they originally dressed to 3-5/8 inches with slight variation? The wider end, I noticed, contained an abnormal type of wood that does not shrink as much across the grain as normal wood, whereas the other end was normal. The agreement in the differences in width of the two ends with the two types of wood therefore indicated that both had shrunk since their manufacture. Further, since one end was still a trifle over 3-5/8 inches wide, both must have been 3-3/4 inches wide originally. That made it possible to eliminate 18 shipments of lumber from the search, and by following most of the other 45 shipments made from the South Carolina mill during the 2-1/2 years preceding the kidnapping, a shipment found in the Bronx in New York City showed exactly the same planing defects as the ladder rails, and later proved to be the place where [Bruno] Hauptmann (the person convicted of the Lindbergh kidnapping) was employed before the kidnapping.

The science of wood technology also helped the case in several other instances. For example, I noticed some faint irregularities on the edges of some of the ladder parts. The question was, were they

Board from
attic floor



Rail
No. 16

USDA Forest Service

Cross-sections of board from attic floor (left) and ladder rail (right)

due to natural raising of the grain, which frequently occurs in such low-grade lumber as was used in the ladder, or were they caused by tools or machinery? A previous study of grain raising in connection with wood finishing at the Forest Products Laboratory and an intimate knowledge of the structure of wood in general made it possible to decide definitely that the fine ridges on the edges of some of the lumber in the ladder were due to planing with a dull hand plane that had nicks in the cutting edge of the bit. A plane that made exactly the same series of ridges was found in Hauptmann's garage after his arrest (a short piece of board with the same ridge marks was also found in his garage, although it was not a piece left over from making the ladder).

Later, when it was discovered that a piece of lumber had been ripped from the attic of the house where Hauptmann lived, science again stepped in to prove that one of the ladder rails had been made from the part of the floorboard that had been removed. Superficially, there was no resemblance between the ladder rail (which appeared to be a 1-x 4-inch, square-edged board like the other ladder rails) and the 1-x 6-inch tongue-and-groove lumber used for the attic floor, except that the two were the same type of lumber, North Carolina

pine. However, because the edges of that rail had been planed with a hand plane instead of by a machine, it meant that the rail had been cut down from a wider board (presumably tongue-and-groove or ship-lapped, as both edges were hand-planed). It was proven beyond a doubt that the two pieces at one time were one board by smoothing off the end of the ladder rail and the end of the attic floor board from which a piece had been sawed off in the attic (as indicated by the sawdust on the floor and a shallow saw cut into the adjacent board), photographing the two ends, and superimposing half of the picture of the end of the ladder rail on the picture of the end of the floor board, which demonstrated the perfect match of the annual rings as to curvature, width, and irregularities. From a previous study of the relationship between the condition under which a tree grows and its structure, it was obvious that two trees could not conceivably grow under exactly the same conditions and produce the same pattern of growth rings for a period of 12 years, which was the number of growth rings present in the thickness of the boards. The perfect match of the rings in the ladder rail and attic floor board therefore precluded any possibility of a mere accidental similarity between the two.

Fires and Firefighting: A Brief History

Jerry Williams, Historical Analyst, Washington Office

Although other countries face serious forest—and brush-fire conditions, very large-scale forest fires are primarily a North American problem. Since the late 1800's, control of forest fires has been considered one of the most important aspects of forestry in the United States and many other temperate climates. Early European-trained foresters had not dealt with large fires covering potentially hundreds of thousands of acres in one fire—forest fires in the United States were much more serious than any they had ever encountered.

Fire had long been used to clear land, change plant and tree species, maintain certain types of habitat, sterilize land, hunt wildlife, and for many other reasons. American Indians used fire to improve wildlife habitat or maintain certain pieces of land. Early settlers often used fire in the same way. But major fires on the public domain were largely ignored, and often viewed as an opportunity to open forest land for grazing. If fires were fought at all, they were fought with shovels, brooms, rakes, firelines, and backfires. If fires were near farms, plows were used to make firelines around farm buildings.

Federal involvement in trying to control forest fires began in the late 1890's with the hiring of General Land Office rangers during the fire season. Largely ineffectual, these rangers were at least aware of many remote fires and could notify towns and settlers if a fire was heading their way. When the management of national forests was transferred to the newly created Forest Service in 1905, the new agency took on the responsibility of creating professional standards for firefighting, including employing more rangers and hiring local people to help put the fires out.

Greatly affecting this decision were the devastating fires that burned some 3 million acres in the northern Rockies in the fall of 1910; fires in other areas burned 2 million acres. Within a year, Con-

gress had passed the Weeks Act of 1911, which, in part, allowed the Forest Service to cooperate with the various States in fire protection and firefighting. The Forest Service also began a program of fire research—a program that continues to this day.

During the fire season, fire spotters were located in lookout houses on mountaintops (many lookouts were just platforms atop trees). The houses varied from low ground houses to very tall towers sometimes more than 100 feet tall. Just after World War I, the Forest Service contracted with the Army Air Service (Corps) to provide airplanes and pilots to spot fires from the air. This program worked successfully for more than 10 years until a comprehensive network of lookout houses and telephone systems was in place. Today, a computer network tracks every lightning strike, and aerial patrols monitor them for active fire sites after lightning storms. The few remaining lookouts are still valuable for locating human-caused fires.

The Clarke-McNary Act of 1924 allowed the Forest Service to administer grants-in-aid to equal the amounts States contributed to firefighting. The Forest Service would also set firefighting and equipment standards.

During the 1930's, the inception of the Civilian Conservation Corps (CCC) program offered an option to just having Forest Service employees and local citizens to fight fire. CCC enrollees were available and were sent by the thousands to help fight fires throughout the West. Such crews were used to successfully test and use the 40-man fire-suppression crew (in the 1930's, there were only male firefighters). The CCC program also built and staffed thousands of lookout houses and towers across the country.

Another new firefighting tactic was employed near the end of the 1930's—having firefighters parachute from airplanes to fires in remote locations before those fires became too large to fight. This

new program was tested on the Chelan National Forest in Washington State during 1939, with the first smokejump into an actual fire on Montana's Helena National Forest in 1940.

In 1935, the Forest Service developed the "10 a.m." policy, which stipulated that a fire was to be contained and controlled by 10 a.m. following the report of a fire, or, failing that goal, by 10 a.m. the next day, and so on. Faced with the necessity of controlling a fire overnight, the Forest Service was compelled to call out massive numbers of firefighters to try and control these blazes during the initial attack.

In 1948, forest fire research was elevated to a division level, and three laboratories opened soon thereafter. By the mid-1950's, the Forest Service gradually assumed the primary responsibility for coordinating wildland and rural fire protection in the United States. During this era, more than \$200 million worth of World War II surplus equipment was passed to State and local cooperators. By 1956, air tankers (often military surplus B-17's)

filled with a borate mixture were used to help control fires, and helicopters were used for transport.

In 1971, the Forest Service modified the "10 a.m. policy" to handle wilderness fires by using a "10-acre policy" as a guide for planning. Thus, some fires were allowed to increase to 10 acres in size only if they did not destroy or threaten to destroy private property or endanger life or property, or were adjacent to the wilderness. Another so-called "let burn" policy came into being in the 1980's that essentially allowed some wilderness and other fires on national forests to burn, depending on conditions.

The 1987 fires in the greater Yellowstone ecosystem were devastating to large areas in and around the national park. In 1994, the worst forest-fire casualties were experienced when 14 firefighters lost their lives when they tried to escape a fast-moving fire on Storm King Mountain in Colorado.

Forest Service fire prevention and suppression techniques and methods continue to change to meet the public's and the agency's needs.

Lake Isabel—Just for Fun

C.J. Huban

Lake Isabel is one of the few reservoirs in the State of Colorado that was built purely for recreation. The concept began in 1919, when the San Isabel Public Recreation Association (Pueblo residents) and the Spanish Peaks Mountain Playgrounds Association (Huerfano and Las Añinas County residents) were organized with assistance from the USDA Forest Service. Their purpose was to establish a program of recreation improvements on the San Isabel National Forest. The group incorporated and sold \$5.00 memberships.

Arthur H. Carhart was the recreational engineer for the San Isabel National Forest. His planning philosophies for the national forests earned him a name as the "Father of the Wilderness Concept." A.M. Cook was the landscape architect, A.M. Hamel, the forest supervisor, and James Lowell, the forest ranger.

Under their leadership, tent colonies, auto camping grounds, and picnic spots were designed and built. Roads were laid out to provide access for the lucky ones who had a car, and trails were developed for hiking.

In 1935, the Pueblo Chamber of Commerce launched a campaign to raise \$9,000 to obtain the site on the St. Charles River for a 40-acre lake. The Colorado Conservation Corps would complete the construction. Despite the Depression, the money was raised. Rye residents contributed \$536 just before the option expired, insuring the project's future.

Work started in early 1936. A wooden sign at the site read: CCC Camp F-59-C. Young men lived in a tent camp, were supervised by Army officers, and worked double shifts. Each man received \$30 a month; \$25 was sent to his family, leaving him \$5 a month for "riotous living."

Progress slowed that spring, when 106 young men did not re-enroll in the CCC—leaving only 80

men to do the work. More did enroll, however, and they were back working at nights with electric power furnished by a 9-kilowatt diesel light plant.

They built a dam that was 90 feet high, 940 feet long, 460 feet wide at the base, and 30 feet wide at the top. It included 275,000 cubic yards of earth borrowed from the lake basin. The spillway was excavated through solid rock.

Miss N. Walker of the Vail Hotel and Mrs. Harry Robbe of Avondale named the reservoir Lake Isabel, and split the \$10 prize that the Chamber of Commerce offered.

Filling the lake began in the spring of 1938. That summer Lake Isabel Lodge opened with cabins, a grocery store, service station, and lunch counter.

The following spring, the last of the CCC workers installed signs, built roads, and did landscaping. The area opened to the public that summer, 20 years after the original plans were made. On July 4, 1939, a reporter counted 490 automobiles at Lake Isabel, and it has been a popular recreation area ever since.

Marion and the Mine

A short, but steep hike from Lake Isabel are the remains of a mining operation. What was this mine? Why was it abandoned?

The mining operations started in the 1870's, when Zina Fairchild homesteaded an area from the headwaters of the St. Charles River down to the present site of San Isabel. He found an outcropping of quartz near the top of his claim. The quartz seemed promising (indicating gold or silver), but he didn't have the money to dig.

In 1879, Fairchild told W.G. Wixson and James H. Graves about his discovery. Graves and Wixson were cattlemen from Hardscrabble (the Wetmore area). Originally all three men were from Lewiston, Idaho. For three-fourths interest in

the venture, Wixson and Graves agreed to dig a crosscut tunnel into the mountain and intersect a possible ore vein.

They started work on the mine, named the Greenhorn, in June 1880. They could only work during the 4 or 5 warm months, so it was 1885 before the 20-foot vein was encountered. It did contain lead, copper, zinc, and some silver, but not enough of any one to justify mining. Discouraged, the threesome paid the annual assessments and tried to sell the property. While waiting, Zina Fairchilds sold his quarter interest to George S. Emerson.

In 1906, Frank Buckley and Henry McElwain, experienced mining investors from Denver, bought the Greenhorn Mine for \$20,000. They renamed it the "Marion" for McElwain's wife.

Henry G. Gray was hired as superintendent and under his supervision the new owners built a wagon road, a log boarding house, store, and office and laid the rails for a tunnel. The old wheelbarrows were replaced by ore cars. A dam was built across the St. Charles a mile above the mine, and a pipeline was laid between the dam and the

mill, where a hydroelectric plant was built to operate mine machinery. The heavy equipment was unloaded from railroad cars at Graneros, and Olaf Larson and Sons used wagons to haul lumber and mill machinery to the mine.

The Marion mine became operational in 1907. In 1908, George Kindle was hired as mine engineer; his wife ran the boarding house for workers. The ore concentrates were hauled to the smelter in Florence. Three levels were driven from the tunnel, which went to an inclined depth of 165 feet. More than 2,500 feet of ore was exposed.

Unfortunately, the mine was not profitable, and in 1915 work at the Marion stopped. The Kindles remained caretakers for many years. Finally, the property was abandoned and the machinery, pipelines, and equipment were sold to Bernstein Brothers for junk.

The mine shaft still stands, along with the remains of the log buildings and the evidence of the engineering for water and electricity—testaments to the determination and skills of many. These days, however, the only gold that glitters at Marion is on the aspens in the fall sunlight.